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Bartholomew

Mr. Henry



For the CURIOUS YOUNG GENTLEMEN and LADIES,
That study and practise the noble and commendable ART of DRAWING,
COLOURING and JAPANNING,
A NEW and COMPLEAT
D R A W I N G - B O O K ;

Consisting of Variety of CLASSES, *viz.*

Whole Figures in divers Positions, and all the several Parts of the Human Body from Head to Foot; light, airy, loose Landskips; Perspective Views of Sea-Ports, Forts, Ruins, &c.

Being the close Study, for a Series of Years, of

The late Mr. L E N S,

MINIATURE-PAINTER, and DRAWING-MASTER to CHRIST'S-HOSPITAL.

In Sixty-two COPPER-PLATES, engraved by himself.

Designed chiefly for young Beginners, and now published from the Author's Originals, very necessary and useful for all Drawing-Schools, Boarding-Schools, &c. &c.

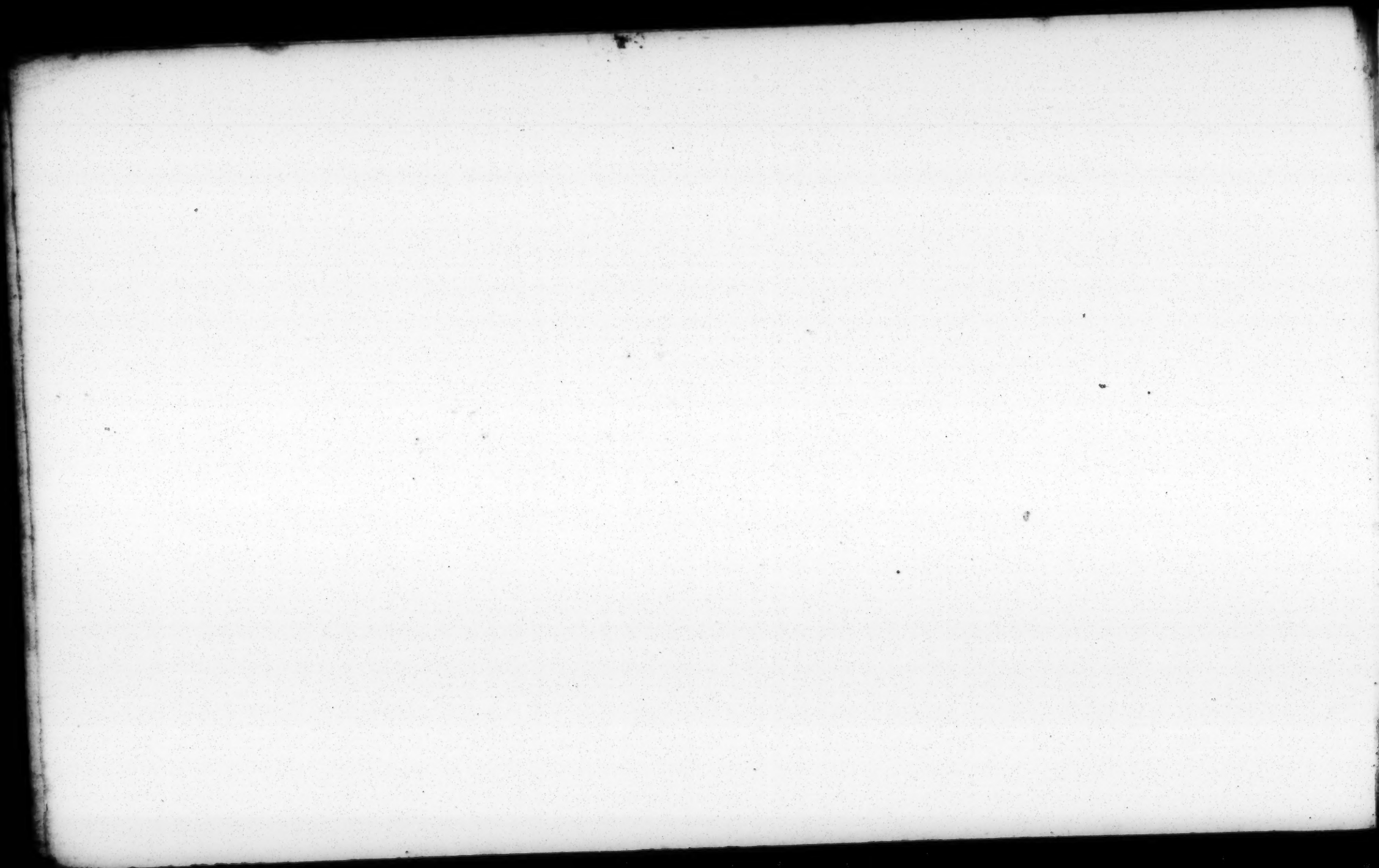
TO WHICH IS PREFIXED

An I N T R O D U C T I O N to D R A W I N G ;

Containing a Description of the Instruments and their respective Uses, and the Materials proper for Drawing; Rules for managing the Pencil, and the best Method for attaining Perfection in the ART; with Instructions by which a young Practitioner shall be enabled to form a Judgment as well of his own Performances as those of others; with easy, proper, and necessary Lessons for him at his first Entrance. Also, the Names of the Colours used, with Instructions to temper and mix them, and fit them for Painting. Likewise, Colours for washing Landskips, or Prints of any Kind; with plain and easy Rules for the Ladies Japanning.

Translated from the FRENCH of Monsieur GERRARD DE LAIRESSE,

And improved with Extracts from C. A. DU FRESNOY, SALMON, &c.



THE INTRODUCTION.

NONE of the Arts which have been invented for the Use or Amusement of Mankind, can boast so great a Number of Admirers as that of **DRAWING**; and very justly, for it gives such an agreeable Representation of Things, that we are apt to fancy we see Objects which have no real Existence, and that the Imagery before us, which is no more than a painted Cloth, actually breathes. The whole Creation, with all its Works and Wonders, comes within the Power of its Imitation. It sets before us Things long since buried in Oblivion, exhibits to perfect View the most noted Actions of People who have been long in their Graves, and shews us our Ancestors, in a perfect Resemblance of their Features, thro' several successive Generations. There is scarce any Art or Profession which receives not some Assistance from **DRAWING**; without her Help no Designs or Models can be well executed; to her the Mathematician, Architect, and Navigator is continually indebted; no Station of Life is exempted from the Practice of it, from the General at the Head of an Army, to the Mechanic, who subsists by his Handicraft. This excellent Art seems inculcated by Nature herself, for we see it not only practised by grown Proficients, but even Children frequently drawing various Figures, and that so curiously, as even to astonish us with their Productions.

That therefore Youth may be instructed how to attain to a good Degree of Perfection in the Art, we shall prescribe the best Rules we are able, at least such, as we apprehend, are absolutely necessary for their Information; after which, we shall give them some very useful and pertinent Instructions for their better understanding of this Art.

RULES for the Direction of the young Practitioner in the Art of DRAWING.

DRAWING may be defined, a Representation, by Lines and Shades, of any Object in Nature or Art; the Imitation of another Draught, or the expressing the Likeness of something conceived in our own Mind. In Imitations of Nature, or copying from any Draught, the Form and Shape of the Figures is the first Thing that makes an Impression on the Mind, which is after-

wards reduced into Form by manual Operation, which draws the Lines; hence appears the Necessity of frequently employing the Mind in curiously observing whatever Objects are proposed to it, by which means it will be more capable of conceiving truly and exactly of Objects, and the Hand will more easily and justly delineate that which is so strongly fixed in the Memory.

It is highly necessary for him who would draw well, to understand what is truly good and beautiful in a Draught: in order to which, the most expeditious Method will be, to compare Prints and Draughts together. Many Painters have grievously miscarried, by satisfying themselves only with imitating bad Pieces, without giving any Scope to their own Genius, or improving their Knowledge in judging of the Beauties and Defects of a Picture. The Ideas in our Minds may in a great Measure serve us for a Model, and to improve these, we should frequently examine the Performances of others, and our Observations on Pieces that are esteemed correctly done, should be nice and critical; we should attentively consider every Print and Draught we see and every Beauty we find in it, endeavour to fix on our Memory, particularly the Freedom and Boldness of the Out-lines, and the Proportion of the several Parts. Above all Things it is necessary that the Judgment be rightly informed for then the young Practitioner will make the greater and quicker Progress in his Improvement, than if he goes on in Practice without encreasing his Knowledge; for his Success will be more owing to his *Genius* than his Hand.

The Labour of the Hand must indeed aid and assist that of the Brain; for whoever would be an able Artist, must, by continual Practice, make the Art habitual. The Rules of all Arts are soon learned, but to attain Perfection in any of them, a long Practice and strict Attention are absolutely requisite. It is a true Maxim, that Laziness was never the Parent of any Thing excellent. *Drawing* is not attainable but by a Length of Time, nor Perfection in it acquirable, unless the Hand be frequently employed in the Practice, and the Mind in judging; every Day should produce something, and the Hand give frequent Proofs of the Speculations of the Head.

As some Part of every Day should be spent in the Practice of this Art, we would recommend the Morning as fittest for that Purpose; which therefore should be employed in perfecting yourselves both in Judgment and Practice.

He who proposes to gain an Entrance into *Minerva's* Cabinet, must make his Approaches gradually; thus in the Art of *Drawing*, tho' the Representa-

ation of the human Figure, or many Figures in a Piece, be the principal Object which every Practitioner has chiefly in View; yet he must not make this his first Essay, but proceed to that by proper and regular Steps. Let the first Part of his Study be to draw streight and curved Lines, square, round, regular, irregular and inanimate Figures; also Parts of human Figures, as the Eye, the Ear, the Hand, Feet, &c. This will be a good Foundation whereon to erect his future Structure; for by this Means he will acquire Readiness of Hand, a Freedom and Exactness in drawing Lines, and accustom himself to the Exercise of his Patience; Qualifications absolutely necessary for one who would be esteemed an exact Copier of Nature, especially in Pieces that require a length of Time, and more than ordinary Skill in the Performance: He who begins well, has more than half perform'd his Work.

The Out-lines are the circumferent Strokes of a Figure; the Perfection of a good Out-line consists in the Freedom and Boldness of the Stroke, and the due Proportion of all its Parts: To attain which, the Scholar is admonished to reject all mean and trifling Practices, such as tracing the Originals thro' ill'd Paper, or making use of thin Paper for the same Purpose, or taking Advantage of an artificial Light. The Use of such Deceptions will certainly prevent all Progress and Improvements in *Drawing*. Neither should the Rule and Compasses be used, except in *Architecture*, or to raise a Perpendicular, in order to form a Square, or some other Figure to draw in; or, when an Artist has finish'd his Draught, he takes this Method to compare it with the Original, to see whether there is an Agreement between them; however, the bare Eye, if used to it, will be sufficient for such a Discernment.

For some Time at first, be satisfied with practising upon a good Out-line, without aiming at a finished Piece, nor is it necessary that you should, as yet, hatch or shade your own Draught; your Out-line at first must be sketch'd with slight and faint Touches, that you may have an Opportunity to amend where proper, which so will have the less Appearance of being retouched. In every Stroke endeavour an exact Imitation, and whenever you mend the Out-line, either by taking away a little of its Parts, or by swelling the others, be sure to lose nothing of the Freedom and Boldness of it. Mind frequently to compare your Copy with the Original, take particular Notice of what is miss, and let not the least Fault escape uncorrected, that so in the Draught, which you may afterwards make of the same Original, those Errors may be avoided; for you must not pass from one Original to another, 'till you are a good Degree Master of the first. The best and surest Method of Prac-

tice is, to make a great Number of Sketches of the same Figure, in each of which endeavour to excel what you did in the former.

In your first Operations proceed slowly, for hasty Productions are seldom beautiful or correct, and a Design is often thus spoiled in the first Attempt; it is no easy Matter to amend bad Habits; Expedition in Performance is acquired by a Constancy in Practice. As the young Beginner will have frequent Occasion for the Exercise of his Patience, he must be careful to subdue his Passions; in his first Attempts he must proceed deliberately and slowly, and use his utmost Endeavours to perform well, secure every Stroke, and try all his Skill to make one good Draught, rather than to hurry over, in a negligent Manner, a great Number of bad ones.

When you sit down to work, and all the Time you are at it, take a strict and close View of your Original, and in your Mind divide it into several Parts; take due Notice of the Length, Breadth, and Similitude of each Part; observe the Proportion of each to the other, and to the Whole, the Distances between the Parts, and the Parts that lie parallel, or are exactly opposite to each other.

When you have finished your Copy, and laid aside both the Example and Draught, let your Mind be employ'd for some Time on other Affairs, then return to it again, and view your Work afresh, and very probably you will discover Faults which did not appear to you before. 'Tis easy to imagine, that when the Eyes have been engaged a considerable Time on the same Object, the Form and Shape of it become familiar to him, and that on a Revival his Mind may entertain different Notions of it than in the Light it appear'd before; and assure yourself, whatever Pains you bestow in reviewing and comparing your Copy with the original Draught, in order to discover and amend your Faults, will not be useless; but you will find this Advantage in it, that it will be a Means of perfecting you in that particular Draught, and improve you in the Knowledge of Lines, Draughts and Proportions, and by continuing to practise this Method, you will in a little Time find yourself qualified for the exactest Imitations.

Let your Out-lines be large and smooth, and drawn in a flowing gliding Manner; for if they are too streight they will carry a disagreeable Stiffness, but if drawn according to this Direction, they will have the Resemblance of Life and Motion, and appear with an easy Grace.

In all your Draughts let there be a perfect Relation between the Parts and the Whole, and Uniformity run thro' the whole Piece, that is, let every Member

Member be made for its own Head, and agree with it; you must not put strong Limbs to a Body that is consumptive, or to old Age in its Decay; nor must you be less exact in pairing the Eyes, Hands, Legs and Feet, for the least Disproportion will be a Blemish; or when any of the Limbs are not proportionate to the rest. In the Instructions which we shall presently give, the Learner will find Directions to avoid any such Mistakes and Solecisms.

When you draw the Muscles, take Care to insert them according to the Rules of *Anatomy*; they must not be crowded into small Sections, but kept as entire as possible, and only the principal Muscles expressed; in a Member which is to express any particular Force, they must be shewn large, as in the Leg when it supports the Body, or in the Arm when it lifts a Weight, &c. and be more swell'd than in any other Members.

Thus when the Limbs and Members are drawn with few and large Muscles, they shew themselves with Majesty and Beauty; so in Draperies, the Beauty of which consists not in a Multiplicity of Folds, but in their plain Simplicity and natural Order. The Drapery must seem to cover the Part loosely, for if it be too close and freight, the Piece will appear too stiff; the Plaits must be large, folding naturally over the Parts which are to be seen underneath, which is done by placing properly the Lights and Shades. In covering both the Extremities of the Joints, such as the Shoulders, Elbows, Knees, &c. Care must be taken to mark them in such a Manner as to distinguish their Shape. And in Fact, Drapery is no trifling or insignificant Part of this Art; for, if well done, it adds a new Grace to the Picture, gives an enlivening Air to its other Beauties, and never fails of pleasing the Eyes of the Spectator.

The MATERIALS proper for Drawing.

THE Materials necessary for this Purpose, are either Pencils of Black Lead, or Black Lead fixed in a Porcrayon, Charcoal, Chalk black, red and white, Pastils or Crayons, Pens, Hair-Pencils, and *Indian Ink*.

Nothing is more proper for Beginners to practise with than Black Lead, in drawing plain Lines, &c. especially as this makes a smoother Stroke than can be done by Charcoal or Crayons. Cut your Lead with a Penknife 'till you have brought it to a fine Point, that it may give a neat small Stroke. Or you may fix a Piece of the same Lead in a Porcrayon. But whatever it is you sketch with, use yourself to hold it long-ways in your Hand, and let your Fingers be much farther from the Point, than the Nip of a Pen is when you

write, and let your Strokes be formed with light gentle Touches; thus you gradually acquire a ready Command of Hand, and you will with Ease make your Out-line free and bold.

In practising after Limbs and Figures it will be proper, at first, to draw the rough Sketch with Charcoal, which is more easily discharged from Paper than Black Lead. Split your Charcoal in small slender Pieces, one of which fix in a Porcrayon the better to hold it; then sharpen it to a Point, and lightly but correctly, sketch out your Original. When you have so done, if there is any Thing you dislike in the Performance, you may easily wipe it out by brushing it with a Feather or clean Rag. When you have secured your Out-lines with Charcoal, proceed thus; take a Feather and wipe them slightly over with it that they may appear faint, then go over the Lines with Black Red-Lead, and correct them wherever you can. If after all this you still find any Errors to amend, take a Bit of Crumb of a stale white Loaf, with which you may discharge any Part of it you please, by rubbing it therewith.

You may use Red-Lead, or Red or Black Chalk in the same Manner Black-Lead.

If in Heightnings, or when you would give strong Lights, or draw colour'd Paper, use white Chalk and Tobacco-pipe Clay.

Pistils and *Crayons* are Terms which perhaps the Learner may not readily understand; they are Colours mixed up with Tobacco-pipe Clay, which may be worked into a Paste, and rolled up into the Thickness of a Quill two or three Inches long, and then dried; when fit for Use, the Artist works them on colour'd Paper, but not in Hatchings, as Black and Red-Lead commonly are; the Colours are rubbed and worked together, so that there is no fine Stroke, but the whole appears as if only a Brush had been used.

The Crayons is a very expeditious Manner of Drawing, and when skilfully handled, always produce a delicate Softness and fine Expression; however must be observed, that the careless or rude Touch of a Finger may at once blot out all the Beauties of this fine Work; to prevent which, let it be covered in Books, or in a Frame under a Glass. The Crayons will be worked more easily if the Grain of the Paper be a little rough, and be expressed more strongly than when the Paper is quite smooth; or if the Paper be somewhat dark or brownish, or what they call a whited-brown, it will give a Relief to the tender Parts of the Work, by shewing the light Strokes of it.

In shading Draughts sometimes Pens are used for hatching the cross Strokes; however, the Hair Pencil and *Indian Ink* serve much better for this

which are not only proper for hatching by Strokes, but for shading by a Method much more expeditious, that is, by Washing, which is the same Way of working as with Hair Pencils and Water Colours. In Hatching, the Shades are produced by Lines, not unlike the Strokes which shade a Print engraved; but in Washing, no Lines appear, but the Shades shew themselves like those in a *Metzintio* Print.

Of the Tints of Lights and Shadows.

LIGHTS and Shades, when judiciously disposed, give the Appearance of Substance, Nature and Distance to such Bodies as the Pencil represents. Suppose, for Instance, a Circle drawn on a Piece of Paper; imagine you see it fill'd up with any even Colour, you can conceive of it no otherwise than as a round, flat equal Body; but if you put the strongest of the Colour in the Middle, and weaken it gradually towards the Extremities, you will perceive an agreeable Deception, and instead of a flat even Body, it will have the Resemblance of a Ball or Globe.

Wherever the Colour appears the most lively, there the Object catches the Eye first, and seems nearest to it; but where the Colour weakens and goes off, it grows faint, and at length seems to fly off and break away from the Sight. Thus the Painter, by breaking and diminishing his Colours, throws that behind which he has a Mind shall be less visible.

When you round the Parts of an Object, it requires the nicest Touch of the Pencil to draw the Extremities so, as that in turning they shall lose themselves sensibly and confusedly, without too sudden a Transition of the Light into the Shadows, or of the Shadows into the Light, but let the one pass into the other as it were reciprocally and imperceptibly, that is, by Degrees of Light to Shadow, and Shadow into Light.

When your Objects are to be painted light, you must allow a due Breadth of Shadow to sustain them; if dark, a sudden Light must rise behind them, to separate them from the Ground, or from other Objects that are placed behind them, or else they will appear as if they were sticking upon each other in a confused Manner; whereas by a just Opposition of Light to Shade and Shade to Light, a Projection is given, which makes a Separation of the Objects.

You must keep a proper Ballance between Light and Shadows, and introducing a broad Light into your Draught, you must give it a large Shadow.

You must make your Light serve as a Repose to the Darks, and the Darks to the Lights; thus a Drapery, which is coloured red or yellow in some Places, in others will take a brown with a good Effect.

The Eye sees an Object the more strongly and plainly the nearer it is; Distance weakens the Sight; the farther off an Object is, the more imperfectly it is perceived; those Objects therefore which stand nearest to View, should be better finish'd than those which are thrown behind; but observe, that they must have a reciprocal Dominion over each other, so that as one Object by its Heightenings forces others to appear at a Distance, so the same Object must be thrown farther from the Sight, than others which are illuminated more strongly.

It should be farther observed in regard to Lights and Shades, that it is not enough that remote Objects be coloured in a more faint and languid Manner, but the more or less distant they are, the Parts should appear more or less confused; the Eye cannot minutely discriminate an Object which is at a Distance from it. We can see human Figures at a Street's Length, but cannot discern the Features of their Faces or the Plaits in their Cloaths; so the innumerable Leaves of a distant Grove appear to the Sight but as one Mass.

White, pure and unmixed, has two different Properties, it draws an Object nearer to it, and it carries it off to a farther Distance. When it is placed with Black, the Opposition of Light and Dark brings the Object more into View, and renders it more sensible; but pure White, as it is the lightest of Colours, will fly off to the remotest View, unless forced forwards, and supported by Black. On the other Hand, pure Black is deemed the heaviest, most earthy and most sensible of all Colours, and presents Objects nearer to the Sight; you must cast it into Masses, confuse it insensibly, and give it its proper Reposes.

In the Representations of Bodies, you must always give them such *Lights* as are most proper and convenient for their supposed Situations. Suppose the Objects before you be in the Fields or open Air, and the Sun obscured with Clouds, your Business is to introduce an universal Light, tho' not vivid or strong, your Shades too must be faint. But when the Sun appears in all its Glory, your Lights must then be very strong and bold, and the Shadows exceeding dark.

Suppose again, that the Object you represent is in a Room, a little, though not very much illuminated, and to survey it you take your Station without, and

and stand level with the Light that strikes upon it, that Figure must have very soft Shadows, which will shew it very beautifully, and tho' the Shadow be so soft, yet the Figure will seem as if it were embossed, and have a very bold Appearance.

When a small Light illuminates a Body, the Shadows on the dark Side appear large, and their Extremities very bold: whereas a large Light renders the Shadows on the darker Side more distinct and much softer than their Limitations.

Useful Instructions for the young Practitioner.

WHOEVER would make any Proficiency in the Art of *Drawing*, must first understand *Geometry*; for it is by this, and the Help of Lines, that we are instructed to take the Length and Largeness of Bodies, and know whether they be streight or curve, round, oval, and square, or any other imaginary Figure. † But as it is not our Business here to treat of *Geometry*, or give those Geometrical Rules which are used in the Art of *Drawing*, we shall refer the Learned to *Le Clerc's Practical Geometry*.

He that would be a perfect Master in the Art of *Drawing*, must learn to sketch well, to which therefore he ought to give the greatest Attention. In copying a Statue, some Persons begin with the Head, which they entirely finish before they proceed any farther; by which means it frequently happens, that they either make the Head too little or too big, and the other Part so disproportionate, that there is but small Resemblance of the Original, occasioned chiefly thro' a Want of duly observing Distances. When therefore you have any Thing to draw, let your first Care be to divide it into its different Parts, then measure the Distances in the Original with your Eye, mark the Distances and Length of each Division with a faint Line on your Paper, and make a Sketch of the whole Figure before you proceed to finish any Part of it; so will you secure the Proportions in the exactest Manner.

The Learner will find among these Examples several Draughts of the Parts of the Face, as the Eyes, Nose, Mouth, &c. viewed in different Positions, all which he should practise upon before he attempts a whole Face; for which Purpose we shall lay down such Lessons and Instructions concerning an Oval, with its several Changes and Variations, and of the Cross in the same, as will enable him to figure all Bowings and Returnings, Reclinations and Inclinations of all Sorts of Faces.

* The Head, you are to observe, has the Shape and Form of an Egg, or Oval; this Head has Eyes, Eye-brows, Nose and Ears, which must be placed in their proper Situations, by running a Cross thro' the Oval. By this Means you will divide the Perpendicular in the Oval into four equal Parts which will make the Head to measure four Noses in Height, the Face three only; the Diameter crossing the Perpendicular, divide into five Parts, each being the Breadth or Wideness of one Eye; this Diameter is called the ocular Line, or that whereon the Eyes are to be placed; you must therefore draw a streight Line from the Top of the right Ear through both Eyes to the Top of the left Ear; and the Line drawn from the Top of the Head down thro' the Nose, Mouth and Chin, is called the Perpendicular, crossing the Diameter or Ocular-line at right Angles; these Lines together we call the Cross of the Oval; upon which Cross (whatever Situation the Face is in) you must place the Eyes, Nose, Mouth and Ears in proper Places.

When you understand this thoroughly, and have fixed it in your Mind you will soon be able to draw good Faces out of your own Fancy and Invention, and execute them in a masterly Manner: But if you accustom yourself to draw only after a Print, Draught or Picture, without knowing the Use of the Cross-lines, and the Proportion of a Face with its Parts, you take a wrong Method, don't know what you are about, and will never attain to any Degree of Perfection.

Having thus instructed you in the several Methods of drawing a Face, we come now to give you the Dimensions and Proportions of the several Parts of the Body.

It was customary with the *Antients* to allow eight Heads to their Figures, though some of them have only seven. The Moderns usually divide a Figure into ten Faces, taking it at the Crown of the Head, and ending at the Sole of the Foot, thus:

• From the Crown of the Head to the Forehead, is the third Part of the Face.

The Face takes its Beginning at the Root of the lowest Hairs on the Forehead, and its End is at the Bottom of the Chin.

Painters divide the Face into three proportional Parts; namely, the Forehead, the Nose, the Mouth and Chin. ✕

The Distance from the Chin to the Pit betwixt the Collar-bones, measure two Lengths of a Nose.

From the same Pit to the Bottom of the Breast, one Face.

From thence to the Navel, one Face.

From the Navel to the Privities, one Face.

The Distance from the Genitals to the upper Part of the Knee, two Faces.

The Knee itself measures half a Face.

Measure from the lower Part of the Knee to the Ankle, and you will find it two Faces.

From the Ankle to the Sole of the Foot, is half a Face.

When a Man stretches out his Arms as wide as he can, a Line drawn from the Top of the longest Finger of the right Hand to the Top of the longest Finger on the left, will measure the Length of his whole Body, or he will find himself as broad as he is long.

The Distance from Side to Side of the Breasts, two Faces.

The Bone of the Arm called *Humerus*, from the Shoulder to the Elbow, measures two Faces.

The Bone called *Cubitus*, with Part of the Hand, measuring from the Tip of the Elbow to the Root of the little Finger contains two Faces.

From the Box of the Shoulder-blade to the Pit betwixt the Collar-bones, is one Face.

In taking the Measurement of the Breadth, from the Extremity of one Finger to the other, to see if it be equal to the Length of the Body, you are to observe that the Boxes of the Elbows with the *Humerus*, and of the *Humerus* with the Shoulder-blade, bear the Proportion of half the Face, when the Arms are stretched out.

The Sole of the Foot measures the sixth Part of the Figure.

The Hand is the Length of the Face.

The Thumb, of the Nose.

From the Place where the Pectoral Muscle, or that Muscle which makes the Breast, disappears, to the Middle of the Arm, measures four Noses.

Carry your Measure from the Middle of the Arm to the Beginning of the Hand, you will find it five Noses.

Your longest Toe is the Length of your Nose.

The Tops of the two Nipples, and the Pit betwixt the two Collar-bones, make an equilateral Triangle.

No certain Measures can be given for the Breadth of the Limbs; because even the Measures are changeable according to the different Quality of the Persons, and Movement of the Muscles.

These farther Rules are to be observed in drawing a Head, *viz.*

You must set the Eyes at such a Distance from one another, that you may place one between them.

The Mouth, when shut, has the Dimensions of an Eye.

The Ears are always on a Level with the Eyes, a-top and below with the Nose, whether it be short or long.

The Nostril should be placed exactly against the Corner of the Eye.

In a Face that is flat, the Cheeks swell out, and one that is lean, the Cheeks fall in, and the Jaw-bones stand out.

Having finished our Instructions for the drawing of the Face, let us now proceed to draw a Man at full Length.

In the first Place you must make your Oval, then divide as before directed; you then draw a perpendicular Line from the Top of the Head to the Sole of the Foot, which you must divide into eight Lengths. This will be a good Direction in placing your Figure upright, or in whatever Action the Posture requires, where it either falls in or swells out. You must make the Length of one Head between the Chin and the Breasts, the third Measure must reach to the Navel, the fourth from thence to the Genitals, the fifth to the Middle of the Thigh, the sixth comes to the lower Part of the Knee, the seventh to the lower Part of the Leg, and the last reaches to the Heel or Sole of the Foot.

In every Measure or Division you must take particular Notice what Touches there are of the Muscles.

The Leg must be first drawn on which the Body stands, then the other, after which draw the Arms and Hands. You must first draw all the Parts very lightly only with a Coal, because that will give you the least Trouble in rubbing out or altering.

The Hands, you must observe, are twice as long as broad, and each of their Parts has its particular Length, Breadth and Thickness.

The Nail of the Finger makes about half the Joint it is upon.

The Length of the Foot measures a sixth Part or Height of a Man, or five Eighths more in Length than in Breadth.

Take Notice, that the Length of the Face and Hands are exactly equal, and is just the tenth Part of a Person's Height.

Having thus instructed you to draw a complete Man, we shall in the next Place lay down some Rules for the drawing of Children.

Some

Some will have the Length of a Child to contain five Measures of the Head, as thus: From the Top of the Head they make three, and the Thighs and Legs two more; the Breadth between the Shoulders is the Length of a Head and a half; the Breadth of the Body above the Navel, the Length of one Head; and the Breadth of the thickest Part of the Thigh is one Third of two Lengths of the Head; the Breadth of the Knee measures exactly the Distance between the Eyes and the Chin; the Brawn of the Arm and Small of the Leg are just the Thickness of the Neck.

If you take the Proportion of a Child standing backward, you will find it of the same Measure as the former.

If you are desirous of drawing a Piece well proportioned, you must be very careful and attentive to copy all the several Parts singly, as the Eyes, Ears, &c.

RULES for filling up empty Figures.

THUS far we have treated of Colours and Out-lines; we come now to instruct the Learner, how to fill up the empty Figures, and to mark the Hatchings so as to produce the best Effect.

In the first Place observe that your Hatchings must consist but of two Strokes, crossing each other, or at most three, to make the strongest Shades. Where the Cavities are such as require the whole Force of your Lead or Crayon, you must rub it upon your Paper as you see Occasion; for it would be a needless Trouble to employ more than three Hatchings one upon another.

When with your Charcoal you have drawn the Out-lines, you must retouch them with your Red-lead Crayon, and then with a Feather brush away the Dirtiness of the Charcoal. When you have done that, you must retouch with a gentle Hand such Places as have been fouled in the rubbing, as the Hair, Eyes, Nose, Mouth, Fingers, Toes, Out-lines, &c. Let me also caution you, that in those Out-lines which are open to Day, you make your Strokes very light, but stronger in those which are darkened. Thus will the Out-lines appear in a natural Manner, and add a wonderful Beauty and Grace to human Figures and all other Objects. When this is done, you must begin the Shades with a single Hatching, but pretty strong; you begin it at the Top, proceeding insensibly to the Bottom, as evenly in the Distances as you possibly can. You then go on to the Roundings, which you must also express by single Strokes, with such a Light as the Object before you requires;

be cautious not to make your Shadows too hard or dark at first. If you would present the Perspective in the best Manner, begin the Shadows lightly and faintly, and heighten them afterwards; and you will soon be pleased with the agreeable Effect.

Instructions how to draw after a Picture, a Model, or the Life.

HAVING given you the necessary Instructions for drawing Prin's and Draughts, we shall, in the last Place, direct you how to draw after a Picture, a Model or the Life, and in what Manner you are to place them.

When you have got a Picture to draw after, be sure to place it in a good Light, so that the Sight of your Eye and the Light of the Day may fall together on the Picture. Place yourself at a moderate Distance, according to the Largeness or Smallness of the Picture, at least no farther off than that you may, with a Glance of your Eye, see the whole Picture at once; for the larger the Picture is, at the greater Distance you must sit to draw it. Be careful likewise to place your Print exactly right before you, and let it not lie down flat; for if it be laid flat, you will quickly see the Figures in it fore shorten'd. The Paper you draw upon you must lay five or six Times double upon a Pannel Board set in your Lap, and raised as high as you can with your Knees, or let it be rested on a Form or stooping Desk, so that your Work may stand upon one End before you. Thus will you be enabled to judge of the Similitude between your Draught and the Original, which it will be impossible for you to do if it lies flat before you. The next Thing you have to do is, to guess as near as you can at the Middle of the Thing you have to draw, whether a Picture or any other Matter; then mark it on your Paper with the Point of your Coal; when you have done this, look for the large Figures (if there happens to be more than one) and touch them lightly in proper Places, and so all that is in the Picture, you will then presently discover, whether your Guessing and Sketching be true or not: But besides this, before you draw a Stroke, be sure you do it with good Reason and Observation, and be very careful about the great and general Parts, and meddle not with the small Breakings 'till the next Sketching, and by constantly practising in this Manner, you will insensibly acquire a Facility and Judgment in your Work. Another Rule you are to observe is, always to begin on the right Side of the Figure, for so you have the first Strokes constantly in your Eye, and the rest will naturally follow and give less Trouble: But if you begin

the left Side, your Hand covers the Object from your Sight. Having thus made a rough Sketch, you should carefully review and examine it, and see if it be done according to Art, and if the Action of the Figure or Figures in it be answerable to the Original; now, as Actions are the Life of a Picture, they must shew themselves in the first Draught, however rude it be, or you can never expect it will be happily finished. You must then correct your Sketch and improve it in Neatness and Air, by adding and diminishing as you see proper, as you may easily do with your Charcoal. But in doing this, be mindful that you don't spoil the first good Actions in it, which may easily be done, if you don't well observe the Movements of several Parts.

You must be careful to admit nothing into your Work that is improper or foreign to the Subject of it, and to let nothing trifling have the chief Place in it.

If you can, always make choice of a *North Light* for your Situation, because it is less variable than any other. Should you sit at a South Window, you will find it proper to place a Sash of oil'd Paper before it, which will break the Intensity of the Sun's Rays, and diffuse them more equally without any sensible Variation. In drawing after the *Life*, you are to consider the likeness or Size of the Object you have to represent, and remove from it to the Distance of three Times its Magnitude, and be seated in such a Manner as that your Eye may be on a Level with it, and at every Stroke you draw be curious to observe what Parts of your Object lie under the Perpendicular or principal Line.

The next Thing you have to do is, to put your Figure, whether it be the *Life* or a *Model*, in a proper Position: the best Light is that which is high and equally diffused, not too strong nor glaring; when Objects are so disposed you see all their Beauties, and the minutest Parts shew themselves to Advantage. But this you are to observe, that in drawing from the *Life*, that your *Light* should come from such an Altitude, as that the Shadows of Bodies projected on the Plane, be equal, and in proportion to their Height. So that the *Light* does not strike upon or enlighten all the Parts, some of which are sheltered by the Protuberance of others; the Eye-brows over-shade the Hollow of the Eye, the Nose hides some Part of the Mouth, and the Throat is obscured by the Chin. For this Reason Portrait Painters blind all the Windows of the Room they work in, except one, the lower Part whereof they close up, and let the Light in from the upper only, which strikes upon the Object they are painting after, while themselves are beneath the Light.

Particular Directions for the young Painter.

THE Instructions we have hitherto given the young Beginner, have been pretty much in the general: we shall now introduce him into every Part of his Work, by such particular Directions, as, by strictly observing them, will make him a compleat Draughtsman.

For drawing the Face.

WHEN you have drawn the Circle of the Face (which you must do at first with a plain circular Line, without making any Bending or Indentures in or out) make a Stroke from that Place of the Forehead which is even with the Chin, down the Place where you intend to fix the Middle of the Nose, and the Middle of the Mouth; this Stroke, you must observe, must be struck that Way which the Face should turn, either to one Side, or straight down, which Stroke will be a great Help to you in placing the Features rightly, so that they may not stand all awry, but directly one under another. Now if the Face turn downward, the Stroke must be struck in such a Manner that the Eyes may turn answerable with the Face downwards; when you have done that, make another Stroke for the Length of the Nose where the End of it should come, and another Stroke for the Mouth, that it be not made crooked, still observing to make all the Strokes to turn one Way, up or down, according as the Face turns, that is, if the Face turns up or down, the Eyes, Nose and Mouth, must turn with it; when you have made these Strokes exactly, proceed to place the Features according to the preceding Rules.

In the Face is usually observed this threefold Proportion. 1. From the Top of the Forehead to the Eye-brows. 2. From the Eye-brows to the Bottom of the Nose. 3. From thence to the Bottom of the Chin. This Proportion however is not constantly the same; for in some Persons the Forehead is lower than in others, the Nose of some longer, and of some shorter than others; and therefore this Rule can only be observ'd in a well proportioned Face. The Distance between the two Eyes is just the Length of one Eye, if in a full Face: but if it turn any thing aside, then that Distance is lessened accordingly; the Nostril ought not to come out farther than the Corner of the Eye in any Face, and the Mouth must be always placed between the Eyes and the Chin, just under the Nose. +

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As the greatest Difficulty, and principal Part of the Art lies in the lively drawing of the Face, I shall add these farther Directions to perfect you in this particular Branch of your Art.

First, If you would draw a Face exactly, so as to resemble the Original you draw it from, you must in the first Place take Notice of the Physiognomy or Circumference of the Face, whether it be long or round, fat or lean, big or little, that so you may be sure to draw the Physiognomy, or Bigness of the Face right; if it be a fat Face, you will perceive the Cheeks to make the Side of the Face swell out, and so make the Face look as it were square; if it be a lean Face, the Jaw-bone will stick out, and the Cheeks fall in, and the Face will look long and slender; if it be neither too fat nor too lean, the Face will for the most part be round.

When you draw the utmost Circumference of a Face, you must take in the Head and all with it, otherwise you may be deceived in drawing the true Bigness of the Face.

Secondly, You must carefully and judiciously observe and discern all the Master Touches, which give Life to a Face, or discover the Grace or Disposition of the Mind, in which lies the whole Grace of the Work, and the Credit of the Workman; thus a smiling Countenance is easily discern'd in the Mouth, when the Corners of it are a little turn'd up; a frowning Countenance in the Forehead, Eye-brows bending, and the Top of the Nose between the Eyes somewhat wrinkled; a sober and staid Countenance is best discerned in the Eye, when the upper Eye-lid comes somewhat over the Ball of the Eye; a laughing Countenance is easily discerned all over the Face, and so is an angry wrathful Countenance, by extraordinary Frownings; there are also some Touches about the Eyes and Mouth, which give Life and Spirit to a Face, which you will by Degrees find out by frequently observing and imitating the Works of the best Masters.

Further Rules for the young Practitioner in Drawing.

1. **Y**OUR Charcoal being neatly sharpen'd, you must, in the drawing of a Face, first lightly draw the Out-stroke, or Circumference of the Face exactly, according to the Bigness of the Pattern, making it to stand fore-right, or to turn upwards or downwards according to your Pattern; then make some little Touches, where the Features, namely, the Eyes, Nose, Mouth, Chin, should be placed, not drawing them exactly at the first; when you have thus

lightly pointed out the Features, then begin to draw them more exactly, and so proceed 'till the Face be finished; which being done, then add the Beard and other Things about it. In drawing a Side-face, you need not at first draw the Nose, Mouth, and Chin, that stand in the outmost Line, but only make it first but a bare Circumference, turning this Way or that Way, according to the Pattern, and then make the Mouth, Nose, and Chin in the Places and just Proportion.

2. You must be sure to place the Muscles in the right and proper Places by the Muscles I mean all the Shadows that are caused by some Dents or Swellings in the Face, and be able to find out the Reason of every Muscle that so you may proceed to work with the more Judgment; the Muscles will be most visible in an o'd wither'd Face, and you must first draw the most principal of them, and then you may draw the more easily the lesser within; be sure to be very exact in the placing of them, or you will spoil your Draught be it ever so good.

3. Observe to make the Shadows rightly, and be careful not to make them too dark where they should be faint; or if you do, you can never recover to make it light again, and so the whole Face will be marr'd, and appear unhandsome; the Shadows are generally fainter and lighter in a fair Face than in a Swarthy Complexion. When your Draught is finished, you will do well to give some hard Touches with your Pen where the Shadows are darkest, which will add a great Life and Grace to your Drawing.

When your Face is finished, you come next to the Ears and Hair, where you must observe this Rule: Having drawn the Out-line of it, you must first draw the principal Curl, or Master Stroke in the Hair, which will guide you with Ease to do the lesser Curls which depend on them; always make your Curl to bend, and turn exactly according to the Pattern, that they may be loose and fast, and not appear stiff, stubborn and unpliant. When you have drawn your Curls exactly, you must in the last Place strike in the loose Hair which hang carelessly out of the Curls.

The Face being drawn (which is the principal Thing in the Art) then proceed to the Hands and Arms, Legs and Feet, and so to full Bodies Men and Women, which are the most difficult Things, which if you can attain to perform, with a well grounded Celerity, nothing will be difficult to you, but most easy, as Flowers, Birds, Beasts, Ships, or any other Thing that is to be drawn by Hand.

Of drawing the Hands and Feet.

WE come now to speak particularly of the Hands and Feet, which you ought to spend some Time about, before you come to whole Bodies; because they will be too difficult for you to enter upon, till you have pretty well practised your Hand in the drawing of other Things, more especially Hands and Feet, which are the most difficult Members of the Body to draw, except the Face; by learning of which you will attain the rest with less Difficulty and greater Perfection; and undoubtedly it is a Thing highly commendable to draw a Hand lively and exactly, which hath such a Variety of Postures and Action, and you will find it no easy Matter to imitate it in every one of them, with Spirit and Life, or without some Lameness or Imperfection.

The Actions and Postures of the Hand are so various, that no certain Rule can be given for drawing of them, only this in general; when you first draw it with Charcoal, you are not to do it exactly, that is, you must not make all the Joints or Veins, or other Things, to appear more than lightly or faintly, and to touch out the Bigness of the Hand, and the Manner of turning it with faint Touches, and not with hard Strokes; if you have done that right, then you part the Fingers asunder, or close, according to your Pattern, with the like faint Strokes; then mark that Place where any of the Fingers stand out from the others, and make a faint Resemblance of it; having so done, if you perceive your Draught to be right, proceed to draw it more perfectly, and make the Bending of the Joint, the Wrist-bone, and other principal Things somewhat exactly. And, lastly, go over it again, and draw every small Bending, or Swelling of the Fingers, and make the Nails, Knuckles, and Veins, so many of them as appear, and every Thing else that you can discern.

The Proportion of a Hand you have sufficiently described in the Print, which shews how many Equalities or equal Measures there be in it, which you should endeavour to be acquainted with, that so you may know when a Hand is well proportioned with just and equal Distances. But you are to observe this Rule, or Exception, that according as the Hand turns one Way or other, the Proportions must be shortened according as they appear to the Eye, as you may see by the fore-shortning of the Hand in the Print; so much as the Hand turns away from our Sight, so much it loses of its ordi-

nary Proportion, and is made so shorten unto that Proportion that the Eye judges of it, nay, sometimes a whole Finger, sometimes two or three, or more, are lost to our Sight, by the turning of the Hand another Way from us, and so they must be wholly left out, and not made. As to the Feet, it is not so difficult to draw them as it is the Hands, and you must proceed in the same Method in the one as in the other. When you can draw Hands and Feet pretty well, then proceed to Arms and Legs, wherein is little Difficulty; after which you may proceed to whole Bodies.

RULES to be observed in drawing the whole Body.

- I**N the drawing of a Body, you must begin with the Head, to which you must give just Proportion and Bigness, because all the Body must be proportioned according to the Head.
- When you have drawn the Head, proceed to the Shoulders, and go on to the Trunk of the Body, beginning at the Arm-pits (leaving the Arms till afterwards) and so draw down to the Hips on both Sides, and be sure you observe the exact Breadth of the Waist: When you have done thus, draw first that Leg on which the Body stands, and afterwards that which stands loose, or from the Body, and last of all the Arms, and then the Hands, either joined to the Body, or separated from it, agreeable to your Pattern.
- Observe in your drawing to place the parallel Joints, Sinews and Muscles, directly opposite in a strait even Line one against the other, as the Shoulders, Arm-pits, Waist, Hips, Knees, and so every Thing else, that one may not be higher or lower than the other, that the Body may not seem crooked or deformed, but every parallel Joint, Bend, &c. may directly answer the other that is opposite to it; to which End you may strike a strait Stroke directly cross the Shoulders, to direct you to place them even and strait one against the other, which you may likewise do in other Places, as the Arms, Waist, Hips, Thighs, or any other Parts that are opposite; where you should place the one even with the other; but you must have the same Care in all Parts of the Body, as you have in one Place, where any Bendings or Members of the Body have or do require a direct Opposition one to the other, you make use of this Help and Direction.
- Observe, that if the Body turn one Way or other, then this Stroke must be so struck, that it may answer the Bowing of the Body; thus, if the Body stoop a little downwards, you must strike the Stroke sloping or sideways,

ways, in which Case you must make the Shoulders and other Things which should be strait against one another, to be somewhat higher than one another, so that the Side which the Body turns upon, the Shoulders and other Things that otherwise should be placed even against the other, must be made somewhat lower than the other Side, more or less according to the stooping of the Body.

5. As you are to be careful in the placing rightly all level or parallel Joints, Bendings, Sinews and Muscles, so you must be very exact in all perpendicular Joints, Muscles, &c. that is, when you have drawn the Out-lines of your Piece, and are come to draw the Joints and Muscles that are within the Body, you must be as exact in placing them, that is, directly one against another, as you are in placing those even that are opposite to one another. To the End that you may place Things exactly perpendicular, that is, in a strait Line one under another, you may strike a strait perpendicular Line from the Pit of the Throat down to the Privities, just in the Middle or Seam of the Body, where you discern the parting of the Rib, and from thence strait down to the Feet; which Line will direct you to place Things perpendicularly even, that the Body may stand strait upright, and not appear crooked or awry.

6. Take Notice of the Bowings and Bendings that are in the Body, to make that Part which is opposite to that which bends, to answer to it in bending with it; thus, if one Side of the Body is bent in, the other Side must stand out answerable to the bending in of the other Side; if the Back bend out, the Belly must bend in; if the Belly come in, the Back must stick out; if the Breech stick out, the Thigh that answers to it in Opposition, must come in; so also in any other Part of the Body; as when the Knee bends out, the Hams that answer to it must come in; and the same Rule must strictly be observed in all other Joints of the Body, otherwise the Body will be made grossly and absurdly, and without any Proportion.

7. Be careful to make all Things of an equal Proportion and Bigness, that one Arm, or Leg, be not bigger than the other, or one Breast larger than the other, or any Part of the Body in an unjust Proportion; but as every Thing in a Face must answer to the Bigness of the Face, so one Member must answer to another in Bigness, that so there may be a perfect Harmony in all the Parts of the Body; that it may not have broad Shoulders and a thin slender Waist, a raw-bone Arm and a thick gouty Leg, or any Part disproportionable from the other, unless it be so that any Part of the Body doth turn awry from our Eye;

thus, if one Arm should be seen side-ways, and the other fore-right, then the one Arm must be made so much less than the other by how much it turns away from our Sight, and appears less to our Eye, and if one Leg be seen full or fore-right, and the other Leg be seen side-ways, then it must be made so much less than the other, by how much it turns away from your Sight.

8. As a just Proportion must be observ'd in the Bigness of your Draught, so likewise in the Length, that one Thing may not be too long for the other, the Body not too long for the Legs, nor the Legs too short for the Body, neither Leg, nor Arm, be disproportion'd in their Lengths, but that every Thing have its due Proportion both for Length and Bigness; unless when the Body shortens away in any Part from your Sight; as thus, if one Leg stand behind the other, it must be made so much shorter than the other, according to the Distance it is removed from your Eye; so likewise if one Arm remove itself ever so little out of your Sight, that which comes first to the Eye, and stands nearest to the Sight, must be made longer than the other, and the other be made so much the shorter, by how much it turns away from your Sight. So, again, if any Part of the Body be fore-shortned, that is, if it appears so to your Eye, as to hinder the full Light of the Latitude of that Part of the Body, then the Body, or that Part of the Body must be made to shorten, according to that Proportion that the Eye judges of it.

9. Observe the due Distance of one Thing from another, that you may be exact in your Draught, and perfectly imitate your Pattern.

10. Observe how much one Part of the Body sticks out beyond the other, or falls in within the other, or whether it stands even with the other; to which End, you may strike a small Stroke down from the Top of the Shoulder along by the Outside of the Body strait down to the Feet; and this will direct you how far one Part of the Body should stand out beyond the other, and how far other Parts should come in; let nothing be done without Rule and Judgment.

11. Let nothing be done, hard, sharp, or cutty, that is, let not the Bendings that are in the Body or in the Joints, be made as if they were Dents or Cuts in the Flesh with sharp corner Strokes, but finely round and sloping like Bendings, and not like Cuts in the Body; this is a common Fault among Learners, who should therefore be the more careful to avoid it by imitating their Pattern exactly, in the Manner of making every Stroke and Touch that is given; for nothing should be done without Judgment.

Of Perspective Proportion.

PERSPECTIVE Proportion differs much from that we have been hitherto describing; and may be defined, The Judgment of the Eye of the Proportion of a Thing by its Distance from it; as thus, if one Part of the Body be nearer to the Eye than the other, it is made so much bigger than the other Part of the Body, which turns away from the Eye; thus if one Leg stand behind another, the foremost Leg that stands first in Sight, must be made somewhat bigger and longer than the other, because the Eye so judges of it; is the same with regard to any other Part of the Body, the Proportion must be lessen'd, according to the Distance of the Object from the Eye.

The next Thing to be observ'd in good Draughts, is graceful Posture and proper Action; that is, that the true natural Motion of every Thing be expressed in the Life and Spirit of it; that is, the Life must be quicken'd by Art; as to express the Majesty of a King, you must put him in such a graceful Posture, as may move the Spectators with Reverence to behold him; so to make a Soldier, you must draw him in such a Posture, as may betoken Courage, Boldness, and Intrepidity; so to make a Clown, he must be seen in the most detestable and clownish Posture; so in every other Instance, the inward Affection and Disposition of the Mind must be expressed in the most lively Manner in the outward Action and Gestures of the Body. Now to attain a competent Skill herein, my Advice is, diligently to observe the Works of our great Master; of those especially who delight in describing a Fight at Land, cuffs; to observe the Eyes of private Assassins, the Courage of Wrestlers, the Actions of Stage-Players, the enticing Allurements of Courtesans, such as are led to Execution, to mark the contracting of their Brows, the Motions of their Eyes, and the Carriage of their whole Body, to the End you may express them to the Life in your Drawings and Works.

Another Thing to be observed in good Draughts, is Looseness or Air; that the Body be not made stiff in any Part, but that every Joint may have proper and natural Bending, so as it may with the greatest Life express our Intention, that the Picture may not seem lame or the Joints stiff, as if they were not pliable or capable of bending, but every Joint or Limb must have its proper and natural Posture, according as it may best suit with and become the Posture in which the Figure is set.

Another Thing to be noted in Drawing is, what the Painters call Fore-shortening, which is, to take Things as they appear to the Eye, and not to draw

the full Length and Proportion of every Part, but to make it shorter, by Reason the full Length and Bigness is hid from our Sight; so, if I would draw a Ship standing fore-right, there can appear only her Fore-part, the rest is hid from our Side, and therefore cannot be express'd. Again, if I would draw a Horse standing fore-right, looking full in my Face, I must necessarily fore-shorten him behind, because his Sides and Flanks are hid from my Eye. Observe therefore this Rule, That you ought rather to imitate the visible Proportion of Things, than the proper and natural Proportion of them; for the Eye and the Understanding together being directed in the perspective Art, ought to be the Guide, Measure, and Judge of Drawing and Painting.

The last Thing to be regarded in good Drawing, is, That every Thing be done by the Guidance of Nature, that is, that nothing be express'd but what accords and agrees with Nature in every Point: As thus, when I would make a Man turning his Head over his Shoulder, I must not make him turn more than Nature will permit, nor must any Thing be forced beyond the Limits of Nature, or be made to come short of it; but tho' Nature must not be stretch'd beyond its Centre, yet it must be quickened to the highest Pitch of it: Thus, if I would express a King, I must express him in the most Majestick Posture I can invent; and if I would draw a Clown, I must represent him in the most clownish Action I can imagine; yet must neither the one nor the other be drawn in such a Posture as will not agree with the Motion of Nature, that is, in such a Posture which Man cannot imitate with his natural Body; so in all other Things, Nature must be the Pattern of all Kinds of Draughts.

RULES for drawing Landskips.

LANDSKIP is the expressing a Tract of Land by Hills, Woods, Castles, Seas, Vallies, Ruins, Rocks, &c. in which there is not so much Difficulty as in drawing Figures; and therefore the following Rules will be sufficient.

1. The best Way of making Landskips, is to represent them shooting away, one Part lower than another, as hath been practised by our best Artists; but others have run into a contrary Error, by making the Landskip mount up higher and higher, till it reach to such a Height, that it seems as if it touch'd the Clouds, as if the Drawer had stood at the Bottom of a Steeple, when he took the Prospect, which is altogether incongruous; for we can discern no Prospect at the Bottom of a Hill; but the most proper Way of making a Landskip, is to make the nearest Hill highest, and so to make the rest that

that are at a greater Distance, to shoot away under that, that the Landskip may appear as if taken from the Top of a Hill.

2. Be careful to lessen every Thing in Proportion to its Distance, expressing it bigger or less according to the Distance it is from the Eye.

3. You must make all your Lights fall one Way, both upon the Ground and Trees, and all Things else, and all the Shadows must be cast one Way.

4. You must give every Thing its proper Motion; as Trees when they are shaken with the Wind, their smaller and more pliable Boughs must be shewn in such an Action, as if they struck one against another, by yielding and declining from that Part whence the Wind blows; the stiffer Boughs have less Bending and Motion; you must likewise observe the Bending of a Twig when a Bird sits upon it, so likewise if it be forced or pressed with any other Thing.

Clouds in the Air must be shewn with Motions now gathered together with the Winds, now violently condensed into Hail, Thunder-bolts, Lightning, Rain, and such like. Finally, you can make nothing but what requires a Motion peculiar to itself, according to which it ought to be represented: But this Rule you must always observe, namely, that all your Motions which are caused by the Wind, must be seen to move one Way, because the Wind can blow but one Way at once.

Always express a fair Horizon, shewing the Heavens cloudy or clear, more or less according to the Occasion; and if you express the Sun, let it be either Rising or Setting, and as it were behind or over some Hill or Mountain.

The Moon and Stars are seldom or never depicted, unless it be in Representation of Twilight, because all Things are supposed to be seen by Day.

If you express the Sun, make his Light to reflect upon all the Trees, Hills, Mountains, Rocks, or Buildings; shading the contrary Side; after which Manner also shadow Clouds, Mists, and the like, making the Shadows to fall all one Way.

In expressing Things at large Distances, as ten, twenty or thirty Miles off; where the Object is hard to be discerned, as whether it be Temple, Castle, House, or the like, shew no particular Signs thereof, or any eminent Distinction; but rather as weakly, faintly, and confusedly as the Eye judgeth of it.

If Landskips be laid in Colours, the farther you go, the more you must lighten it with a thin and airy Blue, to make it seem as if it were afar off, be-

ginning first with a dark Green, so driving it by Degrees into a Blue according to the Distance.

In Rivers, observe the general Current, and dashing of the Waves against the Boat Sides. In the Sea, observe the Waves and other proper Agitations, the Rowing of the Billows, the Tumbling of Vessels up and down; Ships floating, some dipt, some half drowned, some standing almost an End, some hid almost with the Waves, thro' the Uncertainty of the Surges, others striving to live. In the Motion of Waters falling from an high Place, but especially when they fall upon Rocks or Stones, you must make it leaping up in the Air, and sprinkling all about.

Let your Work imitate the Season you intend it for. Thus, if you intend it for a Winter Piece, represent felling of Timber; sliding upon the Ice; fowling by Night; hunting of Bears or Foxes in the Snow; making the Trees every where naked or laden with a Hoar Frost; the Earth bare without Greenness, Flowers or Cattle; the Air thick; Water frozen, with Carts passing over it, and Boys upon it, &c.

Lastly, let every Site have its proper Works, Adjuncts, or additional Graces, as the Farm-house, Windmill, Woods, Flocks of Sheep, Herds of Cattle, Pilgrims, Ruins of Temples, Castles, Monuments; with a thousand such other Things, only proper to particular Subjects.

To take the perfect Draught of any Picture.

TAKE a Sheet of fine *Venice* Paper, wet it all over with Linseed Oil on one Side thereof, which then wipe off as clean as you can; let the Paper dry, and lay it to any painted or printed Picture, then with a black Lead Pencil you may draw it over with Ease; put this oiled Paper upon a Sheet of clean white Paper, and with a little pointed Stick or Feather out of a Swallow's Wing, draw over the Stroke which you draw upon the oiled Paper; so shall you have the exact Form upon the white Paper, which may be set out with Colours with pleasure.

Or thus: The Picture being drawn as before in the oiled Paper, put it upon a Sheet of white Paper, and prick over the Drawing with a Pen; then take some Small-coal, powder it fine, and wrap it in a Piece of fine Linnen and bind it up therein loosely, and clap it over the pricked Line by little and little, and then draw it over again once or twice, with Pen or Pencil.

Or thus: Rub a Sheet of white Paper all over on one Side with Black-lead, or else with Vermilion mixed with fresh Butter; lay the coloured Side upon a Sheet of white Paper; then lay the Picture you would copy out upon the other Side of the coloured Paper, or with a small pointed Stick, or Swallow's Quill, go over all the Strokes of your Picture, and it will be exact on the white Paper.

Or thus: Take an oiled Sheet (as before) rub one Side of it with Lamb-black or Lake; lay it upon a Sheet of fair Paper, with the coloured Side downward, and upon it lay the Picture you would copy out, and trace it over with your Swallow's Feather.

Or thus: Take fine Lake mixed with Linseed Oil, and draw with it over all the Out-strokes, and other material Parts of a Picture; then wet the contrary Side of the Picture, and press it hard upon a Sheet of Paper, and it will leave behind it all that which you drew over.

To take the Shape of a Leaf, Herb, or Plant.

HOLD a whole Leaf or Sprig (as of Nettle, Plantane, &c.) in the Smoak of Gum Sandrack, Rosin, a Link, or Wax Candle, 'till it is well black'd, which place between the Leaves of a Sheet of White Paper, and carefully press upon the Leaf with some smooth Thing; so shall you have in a Moment the Print on the Paper, especially the Backside thereof, with the very Ramifications of the Fibres dispersed thro' it. This may be of good Use in Travelling, when we meet with strange Plants.

To take the Picture of an Herb from an old Picture.

TAKE Venice Soap, dip it in Water, and rub or moisten the old Picture all over very well with it, then put upon it a Piece of white Paper, with other Paper over it, and rub hard thereupon, or press them strongly together, and the old Picture will come off exactly upon the white Paper.

Of Colours for Landships.

1. **F**OR a Light Green, use Pink, and Masticot heightened with White; for a Sad Green, Indico, and Pink, heightened with Masticot.
2. For some Trees, take Lake, Umber and White, for others Charcoal

and White, for others Black and White, with some Green; adding some Lake, or Vermilion, with other Colours.

3. For Wood, take Lake, Umber and White, mixing sometimes a little Green withal.

4. For Fire, lay Red Lead and Vermilion tempered together where it is reddest; where it is Blue, lay Oil, Smalt and White Lead; where it is Yellow, take Masticot, and work it over in certain Places; where you would have it shine most, with Vermilion.

5. For an Azure Sky, which seems afar off, take Oil, Smalt, or Bice, and temper them with Linseed Oil, but grind them not; for Smalt or Bice utterly lose their Colour in grinding.

6. For a Red Sky, take Lake and White; and for Sun-Beams, or Yellow Clouds at Sun-rising or setting, take Masticot and White.

7. For a Night Sky, or Clouds in a Storm, take Indico deepened with Black, and heightened with White.

8. For Wood Colours, they are compounded either of Umber and White, Charcoal and White, Seacoal and White, Umber black and white, or with some Green added; to which you may adjoin sometimes, as in the Barks of Trees, a little Lake or Vermilion.

How to cleanse any old Painting.

TAKE Wood Ashes, and searce them, or else some Smalt, or Powder-blue, and with a Sponge and fair Water, gently wash the Picture you would cleanse (taking great Care of the Shadows) which done, dry it very well with a clean Cloth.

Then varnish it over again with good Varnish, but such as may be washed off again with Water if need be.

Or, take either common Varnish (made with Gum Sandrick dissolved in Linseed Oil by boiling) or Glair of Eggs, and with your Pencil go over the Picture once, twice, or more therewith, as need requires.

Of Fresco, or Painting of Walls.

IN painting upon Walls, to make it endure the Weather, you must grind your Colours with Lime-water, Milk, or Whey, mixt in Size Colour in Pots,

The Paste or Plaister must be made of well-wash'd Lime, mixt with fine Powder of old Rubbish Stones; the Lime must be so often wash'd, 'till all its Salt be castrated; and all your Work must be done in clear and dry Weather.

To make the Work endure, strike into the Wall Stumps of headed Nails, about five or six Inches asunder, and by this Means you may preserve the Plaister from peeling.

Then with this Paste, plaister the Wall a pretty Thickness, letting it dry, being dry, plaister it over again about the Thickness of half a Barley-corn, very fine and smooth, then your Colours being ready prepared, work this last Plaistering over while it is wet, so will your Painting unite and join fast to the Plaister, and dry together as a perfect Compost.

In Painting be nimble and free, let your Work be bold and strong, but be sure to be exact, for there can be no Alteration of the first Paintings, and therefore heighten your Paint enough at first, you may deepen it at pleasure.

All Earthy Colours are best; as the Oker, Spanish-white, Spanish-brown, Terra-vert, and the like; Mineral Colours are naught.

Lastly, let your Pencils and Brushes be long and soft, otherwise your Work will not be smooth; let your Colours be full, and flow freely from the Pencil or Brush; and let your Design be perfect at first, for in this there is no after Alteration to be made.

Of Washing, and other Materials thereof.

BY Washing here we intend nothing more, but either to set out Maps, or printed Pictures in proper Colours, or else to varnish them.

The Instruments and Materials of Washing are six, viz. 1. *Alum-water.* 2. *Size, or Gum-water.* 3. *Liquid Gold.* 4. *Pencils.* 5. *Colours.* 6. *Varnish.*

To make Alum-water: Take Alum, eight Ounces; fair Water, a Quart; boil them till the Alum is dissolved.

Or thus: Take Spring, or Well-water, a Gallon; Rock Alum, a Pound, beat it to Powder, and dissolve it in Water by boiling; filter it thro' a brown Paper, and keep it for Use: With this Water wet your Paper before you lay on your Colours, it will keep them from sinking in, and withal, add a Lustre and Beauty to the Colours laid on: But this you must note, that if your Paper

is not good, you must wash it over four or five Times, which may be done with a large Pencil Brush: Moreover, Alum generally raiseth staining Colours, and preserves them from fading.

To make Size: Take Glew, which steep all Night in Water, then melt it over the Fire, to see that it be neither too strong nor too weak; then let a little of it cool; if it be too stiff when it is cold, put more Water to it, if too weak more Glew, using it luke-warm.

To make Gum-water: Take pure Spring Water, a Quart; put it into a Jar Glass, and hang therein a sufficient Quantity of pure, white and clean Gum-Arabick, bruised and tied up in a Rag; let it hang till the Gum is dissolved, then put your Fingers into the Water, and if you find them stick together as if they were glewed, your Water is too stiff, or full of the Gum, which you must remedy by putting thereto more fair Water; and if you find it too weak, you may help it by adding more Gum: With this Water, or the former Size, most Colours are to be tempered, and with so much of the Gum-water, as being touch'd when dry, the Colour will not come off: Where note, that if the Colour glisten, there is too much Gum in it.

Liquid Gold and Silver: Take five or six Leaves of Gold and Silver, which grind (with a stiff Gum-lake Water, and a good Quantity of Salt) as small as you can; then put it into a Vial, or glazed Vessel; add so much fair Water as may dissolve the Gum-water; then let it stand four Hours, that the Gold may settle; decant the Water, and put in more till the Gold is clean washed: To the Gold put more fair Water, a little Sal-Armoniac, and common Salt, digesting it close for four Days: Then put all into a Piece of thin Glovers Leather (whose Grain is peeled off) and hang it up, so will the Sal Armoniac fret away and the Gold remain behind, which keep.

Or thus: Grind fine Leaf Gold with strong or thick Gum-water very fine, and as you grind add more thick Gum-water being very fine, wash it in a great Shell as you do Bice; then temper it with a little Quantity of Mercury Sublimate, and a little dissolved Gum to bind it in the Shell; shake it, and spread the Gold about the Sides thereof, that it may be all of one Colour and Fineness, which use with fair Water, as you do other Colours. The same observe in liquid Silver; with this Observation, That if your Silver, by Length of Time or Humidity of the Air, become rusted; then cover the Place with Juice of Garlick before you lay on the Silver, which will preserve it.

When you use it, temper it with Glair of Eggs, and so use it with Pen or Pencil. Glair of Eggs is thus made: Take the Whites and beat them with a

Spoon, till they rise all in a Foam; then let them stand all Night, and by Morning they will be turned into a clear Water, which is good Glair.

Of Colours simple for washing of Maps, &c.

ALOES: Let it be dissolved in a weak Gum-water; it makes a deep or sad Kind of Yellow Colour, according to the Goodness of the Yellow.

Brazil: To some Ground Brazil put small Beer and Vinegar, of each a sufficient Quantity; let it boil gently a good while, then put therein Alum in Powder to heighten the Colour, and some Gum Arabick to bind it; boil it till it taste strong on the Tongue, and make a good Red, Pink Colour, or light Violet.

Logwood: Ground Logwood boiled as Brazil, makes a very fair, transparent Violet, or Purple Colour.

Cochenele: Steeped as Brasil was boiled, makes a fair, transparent Purple: As thus, take Cochinele, and put it into the strongest Soap-lees to steep, and it will be a fair Purple, which you may lighten and deepen at Pleasure; infused in strong Vinegar, it makes a transparent Purple.

Madder: Take Madder, four Drams; Ground Brazil, one Ounce; Rain-water, a Quart; boil away a Third Part; then add Alum, half an Ounce, boil it to a Pint; then Gum Arabick, one Ounce; which boil till it is dissolved, cool it, stirring it often, and strain it for Use: It is a good Scarlet Die for Leather.

Verdigrise: Take Verdigrise ground finely one Ounce, put to it a good Quantity of common Varnish, and so much Oil of Turpentine, as will make it thin enough to work withal; it is a good Green. Fine Verdigrise, dissolved in Rhenish Wine or Vinegar, makes a transparent Green inclining to Blue; ground with Juice of Rue and Gum-water, it is a pure Green; without the Juice, it makes a glorious Emerald; mixed with Crystal of Tartar in White Wine Vinegar, in which Gum Arabick has been dissolved, makes a pure Green. And Verdigrise, Alum, of each one Dram; Logwood, three Drams; boiled in Vinegar, make a good Murry.

Gambogia: Dissolve it in fair Spring-water, and it will make a beautiful and transparent Yellow; if you would have it stronger, to dissolve some Alum therein; it is good for Silk, Linen, White-Leather, Parchment, Vellum, Paper, Quills, &c. This Colour delights in no Mixture.

To make Verdigrise and Ceruse, according to Glauber.

THESE Colours made with Vinegar in Earthen Pots set hot into Horse-Dung; but if you dissolve your Venus and Saturn with Spirit of Nitre, and precipitate Venus with a Lye made of the Salt of Tartar, and your Saturn with Salt Water, edulcorating and drying them, the Venus will yield an excellent Verdigrise, which will not corrode other Colours as the common Verdigrise does; and the Saturn yields a Ceruse whiter and purer than the ordinary, and is much better for Painting and Chirurgery.

Yellow Fustick-berry: Boil it in Water, or steep them in Alum-water, it makes a good and transparent Yellow for the same Purpose.

Turnsole. Put it into a sharp Vinegar over a gentle Fire till the Vinegar boil and is coloured; then take out the Turnsole and squeeze it into the Vinegar, in which dissolve a little Gum Arabick; it shadows very well on a Carnation or Yellow.

Litmoſe. Cut it into small Pieces, and steep it a Day or two in Gum-lake Water, and you will have a transparent Blue Water to wash with.

Flory Blue. Grind it with Glair of Eggs, if you then add a little Rosſel it makes a light violet Blue; mixed with White and Red-lead, it makes a Crane-feather Colour.

Saffron. Steeped in Vinegar and mixed with a Gum-water is a good Yellow. In White Wine or Sack, it makes also a good Yellow; but more glorious if you mix it with equal Parts of Cochinele; you may also steep it with Glair of Eggs, or grind it with Vermilion.

Indian Lake. Ground with Gum-Arabick Water, makes a glorious Murry; in grinding it, add a little Sugar-Candy; some say it makes a deep Pink of a Bloom Colour.

Vermilion. Being ground with Glair of Eggs and Honey or Gum-Water, it makes a deep Red, or Scarlet Colour.

Red-lead. Grind it with a stiff Gum-lake Water; if you add Saffron, it makes an Orient, and of a Marigold Colour; of itself it is between a Red and an Orange Colour.

Rosſel. Washed and tempered with Gum-water, differs not much from Indian-Lake; but it will soon fade and grow lighter; but being tempered with Brazil-water, 'twill be more deep.

Indian-Lakes. Use them as you do Turnsole; they make a good transparent Red Colour; into the Liquor put some Gum to bind it.

Masticott. Ground and tempered with Gum-water, makes a good Yellow, but not transparent.

Orpiment. Washed and coloured with Gum-water, makes an orient or Gold Colour; there are several Degrees of it, some more red, others more yellow.

Verditure. Washed and tempered with Gum-water, it is a good Blue, but not transparent, or inclining to Green.

Indico. Ground and tempered with Gum-water, makes a deep Blue, and is fit to shadow all other Blues.

Blue Bice. Washed and tempered with Gum-water, it is an excellent Blue. There are several Sorts of it, some lighter, some sadder. Blue Bice, Verditure, and Smalt, ground singly with Gum water (or together) make a good Blue.

Smalt. Ground with a little fine Rosel, makes a deep Violet.

Ultramarine. If you would have it deep, grind it with Litmose-water; it is the best and dearest of all Blues.

Sap-green. Steep it in sharp Vinegar all Night, to which add a little Alom to raise its Colour. In Alom-water it makes a good Green to shadow with.

Green Bice. Washed and tempered with Gum-water, makes a good, but no transparent Green.

Lamp Black, or Printers Black. Burnt, ground, or tempered with Gum-water, makes a good Black.

Ivory Black. Burnt, ground, and tempered with Gum-water, makes a good Black.

Flake-lead. Ground and tempered with Gum-water, is an excellent White.

Spanish White. Ground and tempered in like Manner with Gum-water, makes the best of all Whites.

Spanish Brown. Burnt, ground, and tempered with Gum-water, makes a reddish Brown, or Liver-Colour.

Umber. Burnt, and ground, and tempered with Gum-water, makes a good Haw-colour; and is very good to shadow with upon Gold.

Green of Walnuts. Boiled in Water, and strained, and Gum Arabick dissolved in the Liquor to bind it, makes an excellent Colour to express Highways, Lanes, &c.

Wood-Soot. Prepared in all Respects as the former, serves to the same Intentions; and is much the better Colour.

Native Cinnabar. Grind it as Red-Lead; it is a glorious Red Colour, much exceeding the artificial.

Of Compounded Colours for washing of Maps, &c.

Orange Colour. Red-lead and Yellow-berries make a good Orange Colour: Thus, take Arnotto half an Ounce, Pot-ashes one Drachm, Water one Pound, boil it half away, then strain it, and use it hot.

It is good for White-Leather, Paper, Vellum, Quills, Parchment, &c.

Green. Take distilled Vinegar, Filings of Copper, digest till the Vinegar is blue, which let stand in the Sun or a slow Fire till it is thick enough, and it will be a good Green.

Or thus: Take Cedar Green (which is best of all) or instead thereof green Bice, steep it in Vinegar and strain it; then grind it well with fair Water, and put to it a little Honey, and dry it well; when you use it, mix it with Gum-water.

To make fine Indico. Take the Blossoms of Oad three Ounces, Amylum one Ounce, grind them with Urine and strong Vinegar, of which make a Cake, then dry it in the Sun, and so keep it for Use.

A Blue to wash upon Paper. Take of the best Azure an Ounce, Kermes two Ounces, mix them, which temper with clear Gum-water, and it will be a glorious Colour.

To make a Venice Blue. Take quick Lime, make it into Paste with strong Vinegar, half an Hour after put thereto more Vinegar to soften it; then add Indico in fine Powder one Ounce, mix them, and digest it in Horse-dung for 30 or 40 Days.

Another and excellent Blue. Mix fine white Chalk with Juice of Elder-berries full ripe, to which put a little Alom-water.

To make blue Smalt. Take fluxible Sand, Sal-nitre and Cobalt, mix them together.

A lively Yellow. Dissolve Orpiment in Gum-water, to which put a little ground Vermillion, grind them together, and you shall have a very lively Colour.

A light Green. Take Juice of Rue, Verdigrise and Saffron, grind them well together and use them with Gum-water.

Or thus: Take Sap-green, Flower-de-luce, or Tawny Green, which steep in Water. Verditure and Ceruse, mixed with a little Copper Green, make a good light Colour.

Blue. Ultramarine, blue Bice, Smalt, and Verditure, ground singly with Gum-water, or together, make a good Blue.

Brown. Ceruse, Red lead, *English* Oker, and Pink, make a good Brown.

Spanish-Brown. To colour any Horse, Dog, or the like, you must not calcine it; (yet not calcined it is a dirty Colour) but to shadow Vermillion, or lay upon any dark Ground, behind a Picture, to shade Berries in the darkest Places, or to colour wooden Posts, Wainscot, Bodies of Trees and the like, it is very good, (being burnt).

Flesh Colour. Mix White, Indian Lake, and Red-lead (according as you would have it light or deep) and to distinguish a Man's Flesh from a Woman's, mingle with it a little Oker.

Colours of Stones. Verdigrise with Varnish makes an Emerald; with *Flourance* Lake, a Ruby; with Ultramarine, a Sapphire.

A never-fading Green. Take Juice of Flowers of Flower-de-luce, put into Gum-water and dry it in the Sun.

Of mixing Colours and Shadowing.

IN mixing be careful not to make the Colour too sad, nor take the Pencils out of one Colour and put them into another.

In mixing Colours, stir them well about the Water severally till they are well mixed; then put them together, making the Colour sadder or lighter at pleasure.

Green is shadowed with Indico and Yellow-berries.

Blue is shadowed with Indico, Litmose and Flory; or any of them being steeped in Soap-ashes, and used with Gum-water.

Garments are shadowed with their own proper Colours; or you may mingle the Colour with white (for the Light) and shadow it with the same Colour unmingled; or you may take the thinnest of the Colour for the Light, and shadow with the thickest or Bottom of the same.

Sap-green is only used to shadow other Greens with, and not to be laid for a Ground in any Garment.

Lake ought not to be shadowed with any Colour, for it is a dark Red; but for a Variety you may shadow it with Bice, or blue Verditure, which will make it like changeable Taffata.

The Shadow for *Yellow-berries* is Umber; but for Beauty's Sake with Red-lead, and the darkest Touches with *Spanish* Brown; and for Variety with Copper-green, blue Bice or Verditure.

White sets off *Blues* and *Blacks* very well; *Red* sets off well with *Yellow*; *Yellows* with *Reds*; sad *Blues*, *Browns*, *Greens*, and *Purples*.

Blues set off well with *Yellows*, *Reds*, *Whites*, *Browns*, and *Blacks*; and *Green* sets off well with *Purples*, and *Reds*.

More especially, all light Colours are shadowed with Colours of the same Nature, but more sad; as for Example; *Vermilion* is shadowed with *Lake*, or *Spanish* Brown: *Verditer* and *Bice* are shadowed with *Indico*: *Camboge* and *Yellow-berries* are shadowed with *Umber*, with *Red-lead*, or *Vermillion*: *Red-lead* is shadowed with *Lake*, or *Spanish* Brown: *Masticote* is shadowed with red Orpiment: *Spanish* Brown is shadowed with burnt *Umber*, with *Brasil*-water: *Umber* is shadowed with *Umber* burnt: *Rosset* and *Brasil* are shadowed with *Spanish* Brown mixed with *Brasil*-water: *Verdigrise* is shadowed with *Indico* mixed with *Yellow-berry* Water: *Wood Soot* and *Walnut Shells* are shadowed with *Umber*.

From the Mixtures of the forementioned Colours, infinite Varieties almost may arise, even whatsoever one pleases: But for our Purpose of washing *Maps*, *Gloves*, *Pictures*, *Landscips*, &c. the most transparent Colours are principal; of which these are chief, viz. *Brasil*, *Logwood*, *Indian Cake*, *Turnsole*, *Cambogie*, *Saffron*, *Yellow-berries*, *Litmose*, *Sap green*, *Verdigrise*, *Wood-soot*, *Walnut-shells*; of these you may by Mixture make several Compounds; as,

A Compound Green: Mix *Verdigrise* Water with *Yellow-berry* Water; it will be transparent, and you may make it deeper or lighter according to the Proportion that you take of either.

A Compound Blue Colour: Mix *Litmose* Water with *Yellow-berry* Water, and you will have a transparent sad Blue, which you may heighten or deepen as the former at Pleasure.

A Compound Orange Colour: It is made by mixing *Brasil* Water with *Yellow-berry* Water of a transparent Colour.

Of Colours for washing Landships.

GREEN mixed with White, Pink, Bice, Masticot, Smalt, Indico, or Ceruse; or Blue Verditure mix'd with a few Yellow-berries makes a good Green for Landships.

For the *saddest Hills*, use Umber burnt; for the *lightest Places*, put Yellow to the burnt Umber; for *other Hills*, lay Copper-green thickened on the Fire, or in the Sun; for the next *Hills farther off*, mix Yellow-berries with Copper-green; let the fourth Part be done with green Verditure; and the *farthest and faintest Places* with blue Bice, or blue Verditure, mingled with White, and shadow'd with blue Verditure, in the Shadows indifferent thick.

Let the *Highways* be done with white and red Lead, and for Variety yellow Oker; shadow it with burnt Umber, which you may use for sandy Rocks and Hills.

Rocks may be done with several Colours, in some Places black and white, in other Places red and white, and others blue and white, and the like as you see convenient.

The Water must be black Verditure and white, shadowed with green and blue Verditure; when the Banks cast a green Shadow upon the Water, and the Water is black shadowed, then shade it with Indico, Green thickened, and blue Verditure.

Colour *Buildings* with as much Variety of pleasant Colours as may be imaginable, yet let Reason be your Rule in mixing your Colours: You may sometimes use White and Black for the *Wall, Conduits*, or other Things. For *Brick Houses* and the like, red Lead and white; if *many Houses* stand together, set them off with Variety of Colours, as Umber and White; Lake and White; Red Lead and White, and the like.

Lastly, for the *Sky*, use Masticot, or Yellow-berries, and White for the *lightest and lowest Places*; red Rosset, and white for the next Degree; blue Bice, and white for the other; blue Bice, or Blue for the *highest*.

These Degrees and Colours must be so wrought together, that the Edge of each Colour may not receive any Sharpness; that is, so as that you cannot perceive where you began to lay them, being so drowned one in another.

Of the Practice of Washing.

WITH the *Alom-water* wet over the Picture to be coloured, for that keeps the Colours from sinking into the Paper, and will add a Lustre unto them, make them shew fairer and keep them from fading.

Then let the Paper dry of itself (being washed with *Alom-water*) before you lay on the Colours; or before you wet it again, for some Paper will need wetting four or five Times.

The Washing of the Paper must be done with a large Pencil Brush.

But if you intend to varnish your Pictures after you have coloured them, instead of washing them with *Alom-water*, first size them with Sew Size made of good white Starch, with a very fine Brush; and this you must be sure to do all over, for else the Varnish will sink through.

Having thus prepared your Work, go to laying on your Colours according to your former Directions, suiting them as near as may be, to the Life of every Thing.

But before you lay on your Colours, you must know how to temper them, which you may do in this Manner. 1. Such Colours as are ground with fair Water; take a small Quantity of them, put it into a Horse Mistle-shell, putting thereto some Gum-water, and the Colour in a little Time will be softened; then with your Finger, being very clean, bruise the Colour against the Shell, till you find no Knot undissolved; after with a clean Pencil stroke down the Colour to the Bottom of the Shell, and it is fit for Use; if it be too thick, add more Gum-water to it. 2. Such Colours as are washed you must temper in a Shell with Gum-water, in the same Manner as the former. 3. Such Colours as are steeped, the Liquor only of them is to be used without any other Preparation.

The Picture being painted, you may with Size paste your Maps or Pictures upon Cloth, thus: Wet the Sheet or Cloth therein, wring it out, and strain it upon a Frame, or nail it upon a Wall or Board, and so paste your Maps or Pictures thereon.

Lastly, if the Picture be to be varnished, having thus fixed it into its proper Frame, then varnish it with a proper Varnish (by the following Rules) and the Work will be fully finished.

How to lay on your Colours.

FIRST provide yourself of Pencils of several Sizes, and if you will be curious, you ought to have a great and a small to each respective Colour; if not, you must always have by you a Dish of fair Water, in which you must wash and cleanse your Pencil, wiping it with a clean Linen Cloth, before you put into another Colour.

For your Pencils chuse those that are good, thus: See that they be fullest next the Quill, descending or lessening into a small Room or sharp Point, which you may see by putting the Hair into your Mouth, and drawing it thro' your Lips once or twice, then you will see what it is, and if you find any straggling Hairs, singe them off with the Flame of a Candle.

Being thus provided with Colours and Pencils, if you design to lay any Colour about the Edges of any Map, Part, Piece, or Division of Ground, in a Plat; as suppose you would inclose a particular Field, or Close in a Meadow, with Yellow; with your Pencil take Camboge, or Yellow-berry Water a very small Quantity, and on the Inside of the Black Lead Line draw the Colour along of an equal Breadth (as near as you can) from the Line, broader or narrower as your Field is in Bigness; not daubing the Field or Close all over with the Colour, which would be but an Abuse to your Map or Plat.

Then having gone round the Close or Field in this Manner, with your Colour, wet your Pencil in your Mouth, or have by you a small Quantity of Water to dip it in, and strike along the Inside of the coloured Line, bringing it more down towards the Center of the Field; and this will sweeten your Colour, and make it shew as if it lost itself by Degrees, to the very Colour of your Paper or Parchment. This Course is to be taken not only for Yellows, but for all other Colours. Lastly, with a Pen (if you cannot do it handsomely with a Pencil) take some of the Colour which shadows the Colour you have already used about the Field, and go over your Black-lead only, so shall your Field be finished.

Lastly, after the same Manner you may adorn all the Parts in your Plat or Map, of divers Colours; observing this, that you colour not two Fields adjoining to one another both of the same Colour; and therefore it behoves you to know what Colours do set off one another best; and as near as you can, to lay Closes or Fields, adjoining to one another, of two such Colours, that one Shadow may serve both.

Of the making of Varnishes.

VARNISH for painting in Oil. Take Mastick, two Ounces; Oil of Turpentine, one Ounce; put the Mastick in Powder into Oil, and melt it over the Fire, letting it boil little or nothing, lest it be clammy; when it is enough you may know by putting in a Hen's Feather, for then it will burn it.

Varnish for painted Pictures. Take white Rosin, one Pound; Plum-tree Gum (or Gum-arabick) Venice Turpentine, Linseed Oil, of each two Ounces; first melt the Rosin and strain it very hot; steep the Gum in Oil Olive (Oil of Ben is better) till it is dissolved, and strain it, to which put the Turpentine and Rosin, and over a slow Fire mingle them all till they are well dissolved: When you use it, use it hot.

Another for the same. Take Olibanum and Gum Sandrick in Powder, which mingle with Venice Turpentine, melting and incorporating them still over a gentle Fire, then strain it hot.

When you use it let it be hot, and your Varnish will shew well; it dries immediately.

Another for the same. Take Oil of Linseed, which distil in a Glass Retort, one Ounce; fair Amber dissolved, three Ounces; mix them over a slow Fire, and it is done.

A very good Varnish for Gold, Silver, Brass, Iron, Stone, Wood, Vellum, or Paper. Take Benjamin (made into a fine Powder between two Papers) put it into a Vial, and cover it with Spirit of Wine four Fingers above it, and let it stand three or four Days; then strain it, and it will be bright and shining, drying immediately, and retaining its Brightness many Years.

If you varnish Gold, or any Thing gilded before the Straining, you should put in a few Blades of Saffron for Colour-fake; but if Silver, or any Thing white, you ought to use the white Part of Benjamin only.

A Varnish particularly for Gold, Silver, Tin, or Copper. Take Linseed Oil six Ounces, Mastick, Aloes, Epatick, of each one Ounce; put the Gums in Powder into the Oil, into a glazed Earthen Pot, which cover with another boiling them together, in the Bottom of which let be a Hole, whereinto put a small Stick with a broad End to stir withal; cover them all over with Clay, except the Hole, set it over the Fire, and stir it as often as it seetheth for a little while, then strain it for Use. First let the Metal be polished, then strike it over with this Varnish.

A Var-

A Varnish for Wood and Leather. Take Tincture of Saffron, or Turmeric in Spirit of Wine a Pint, prepared Gum-lake a sufficient Quantity; dissolve the Gum in the Tincture and it is done.

This is a Varnish of great Use to lay over Gold, and Silver, or any Thing which is exposed to the Air.

To make the Common Varnish. Take Spirit of Wine a Quart, Rosin one Ounce, Gum-lake a sufficient Quantity; dissolve the Gum in a gentle Heat, (being close covered) and let them settle; then gently decant off the Clear, which keep in a close Glass-bottle for Use.

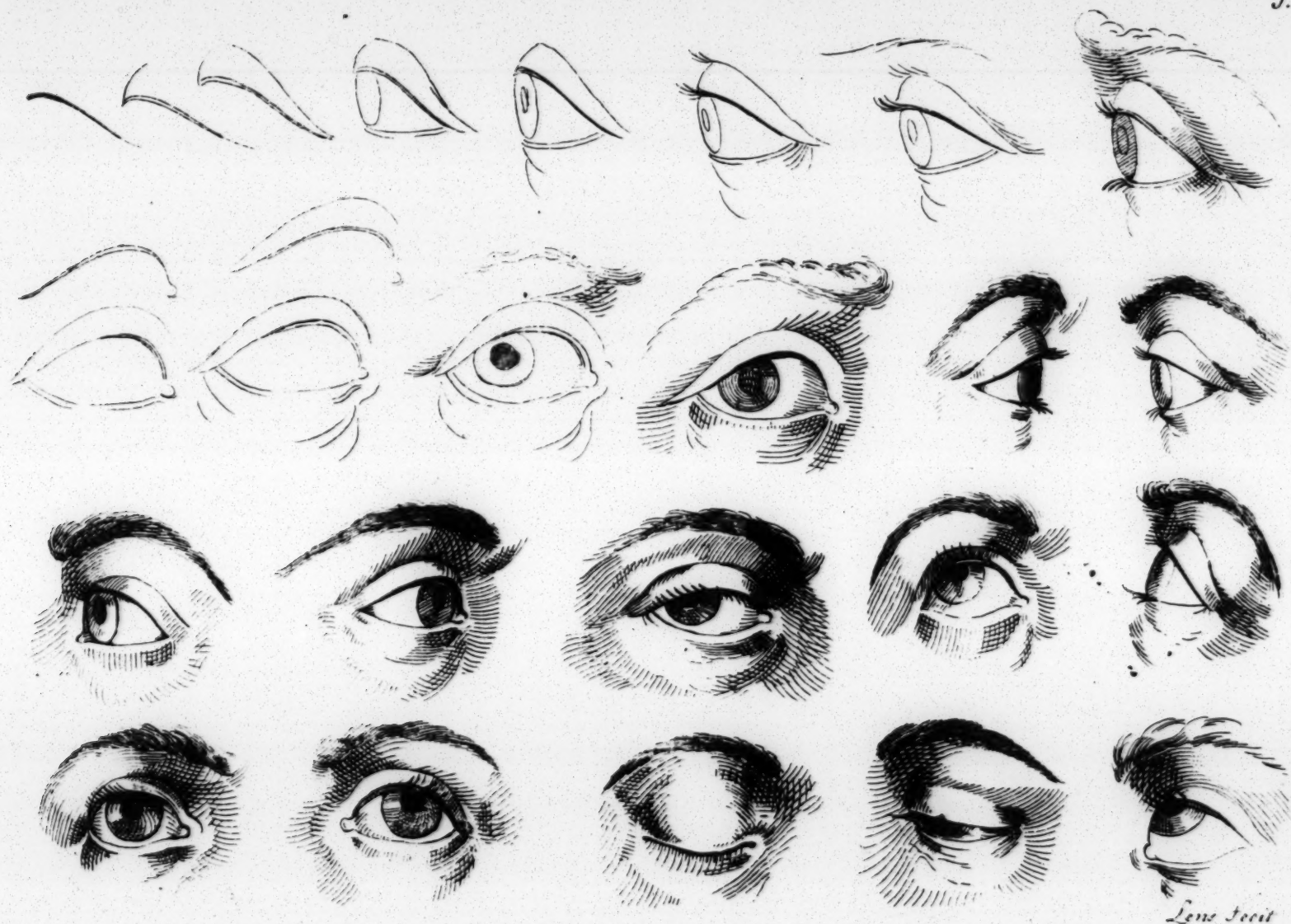
Directions for making the Ladies WHITE JAPAN.

TAKE Whiting, the Quantity of three or four Balls; slake it with Water in a large Pot; let it stand a Quarter of an Hour; then stir it, and

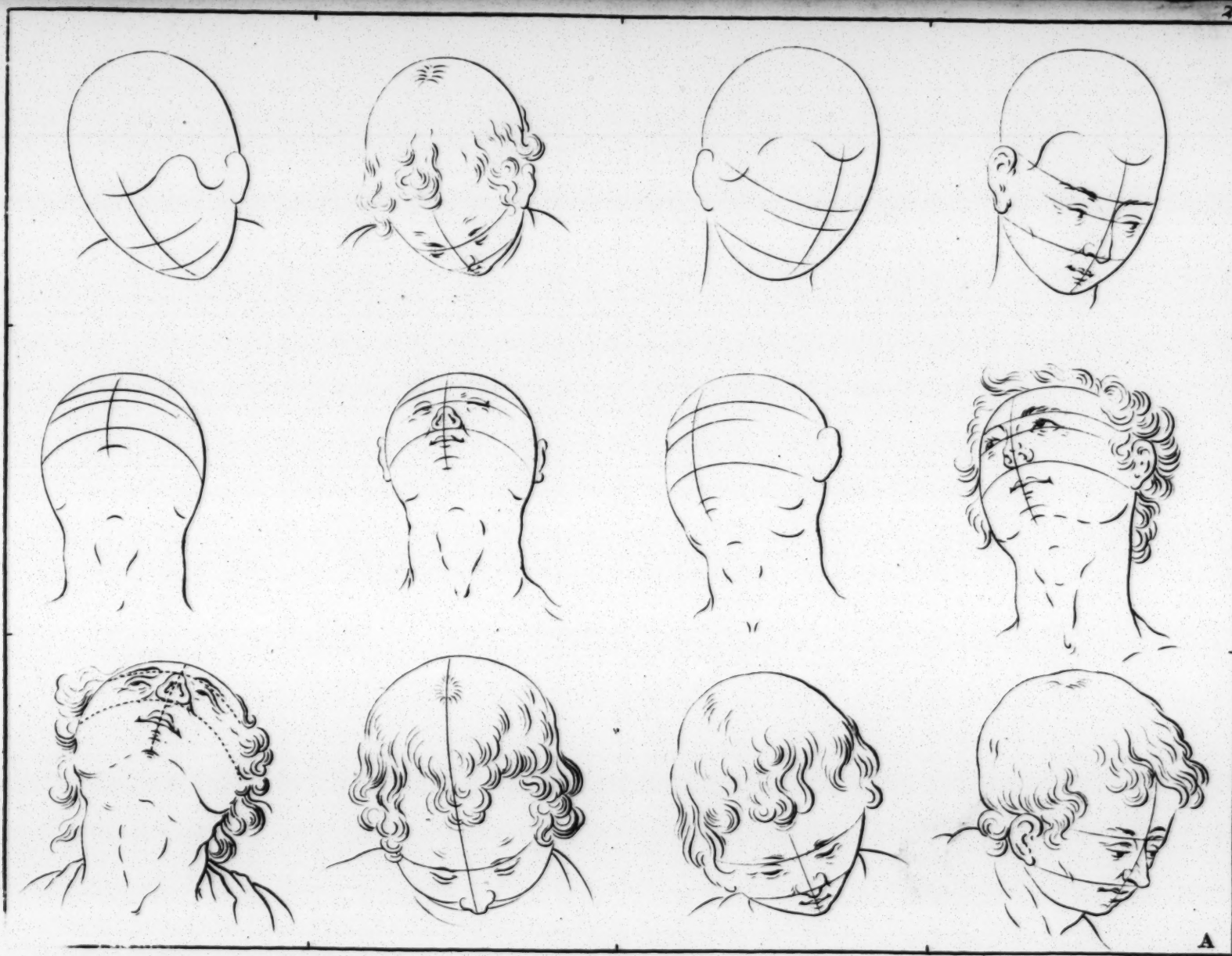
pour the Top off into another Vessel, and so repeat it 'till it becomes fine; then take some Parchment Size and mix with it, and lay it on the binet with a Camel's-Hair Tool; let it dry well, and so repeat it three or Times; then rub it with *Indian Reed* till it is smooth; then take some white, or Flake white, mix them with your Gum-water, and work them on a Stone till it is very fine; then lay it on as before, once or twice as Occasion require. Your Ground being thus prepared, take the White of an Egg, dip it according to the Form of your Print, and lay it smooth on your Canvas; then dry it exceeding well, and do all your Prints over with Gum-water, and when they have stood one Day, then varnish it with a Camel's Hair Tool, which you must repeat three or four Times before a Fire.

F I N I S.







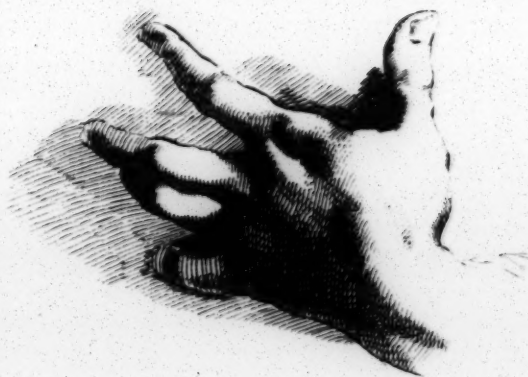
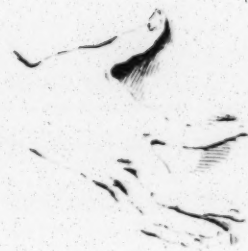
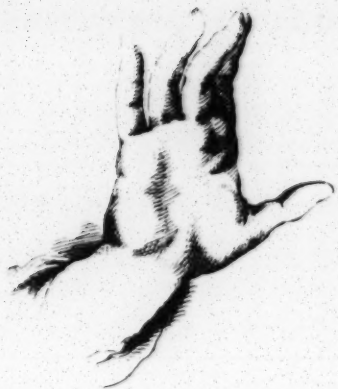






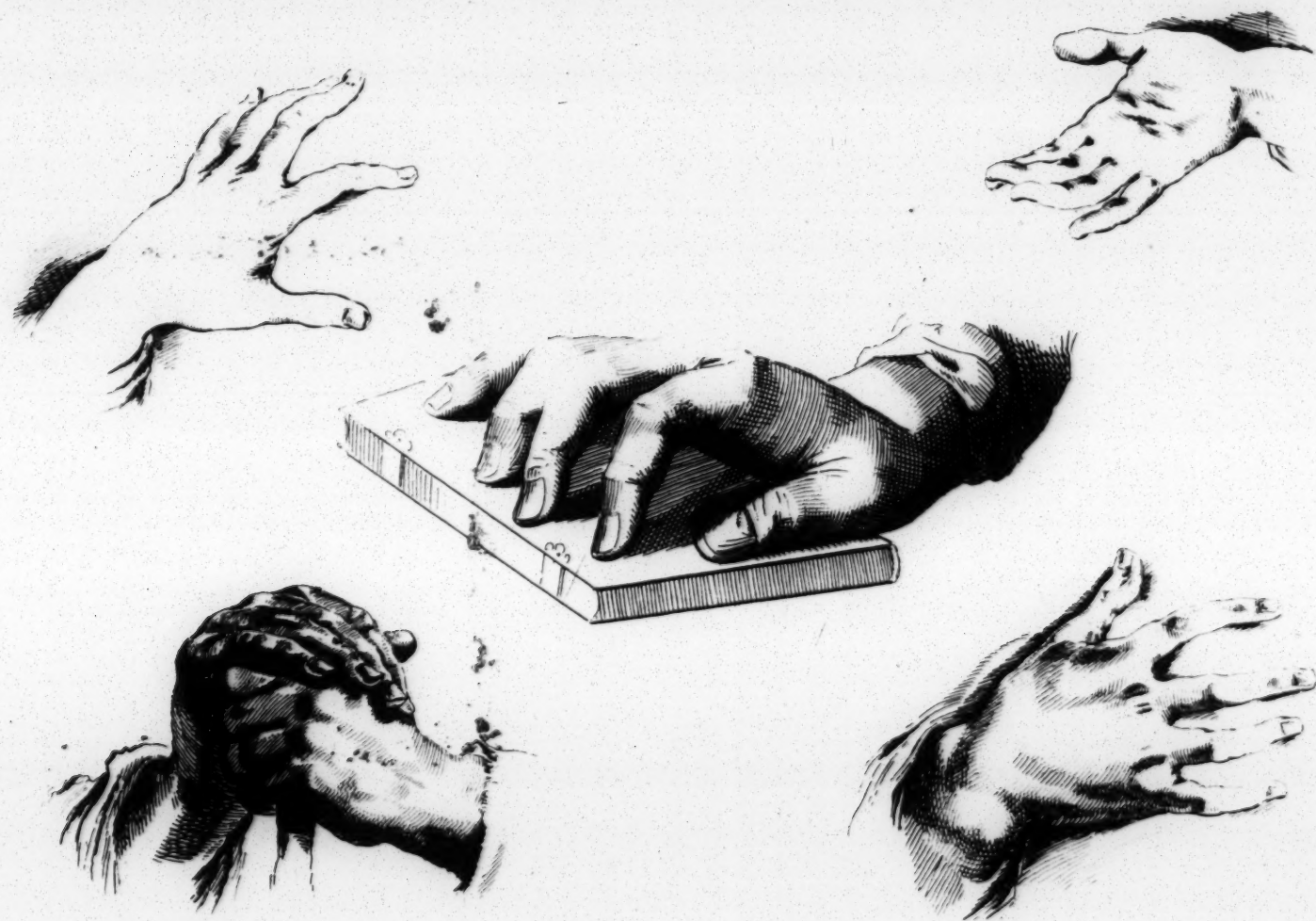
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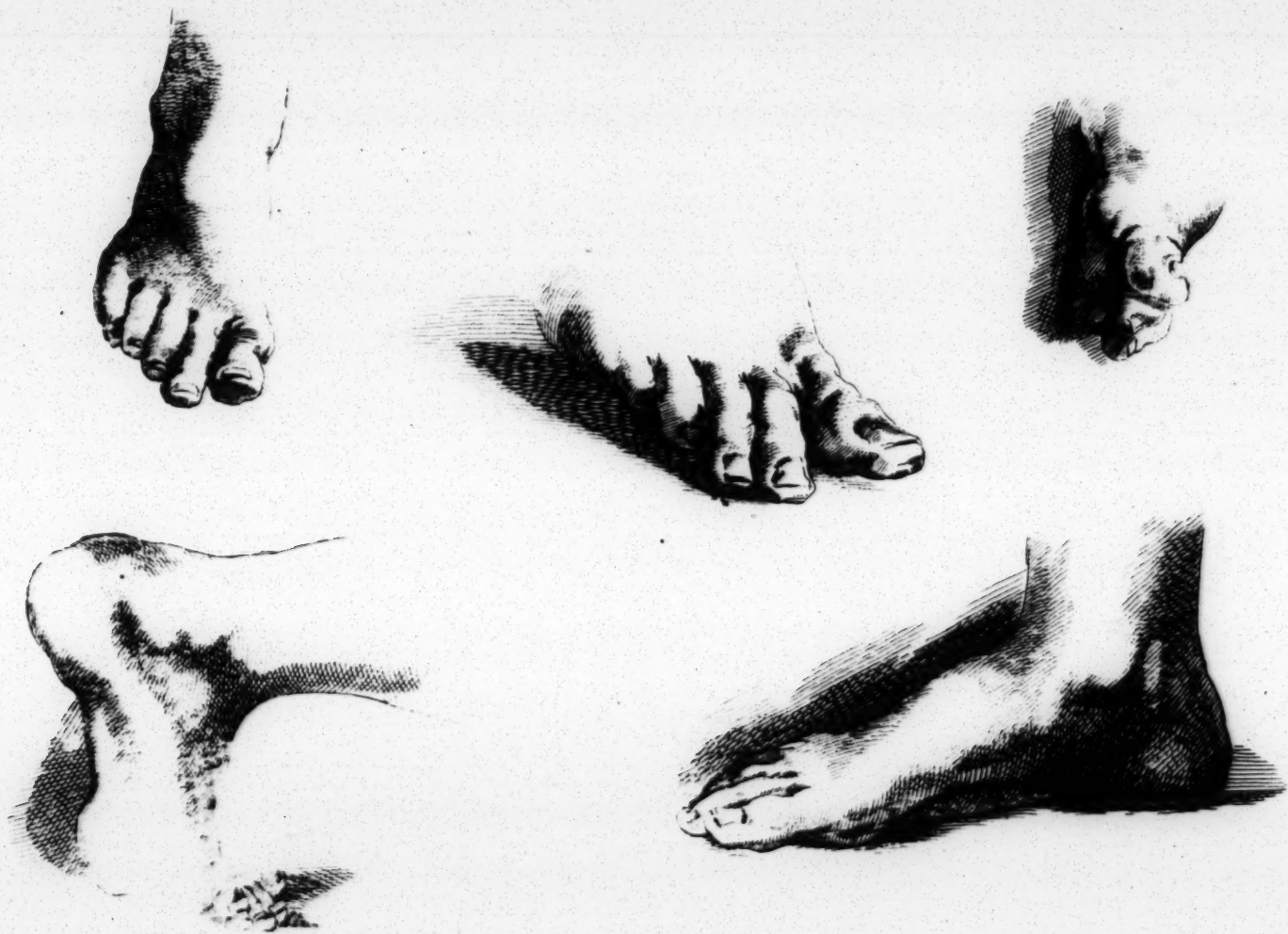
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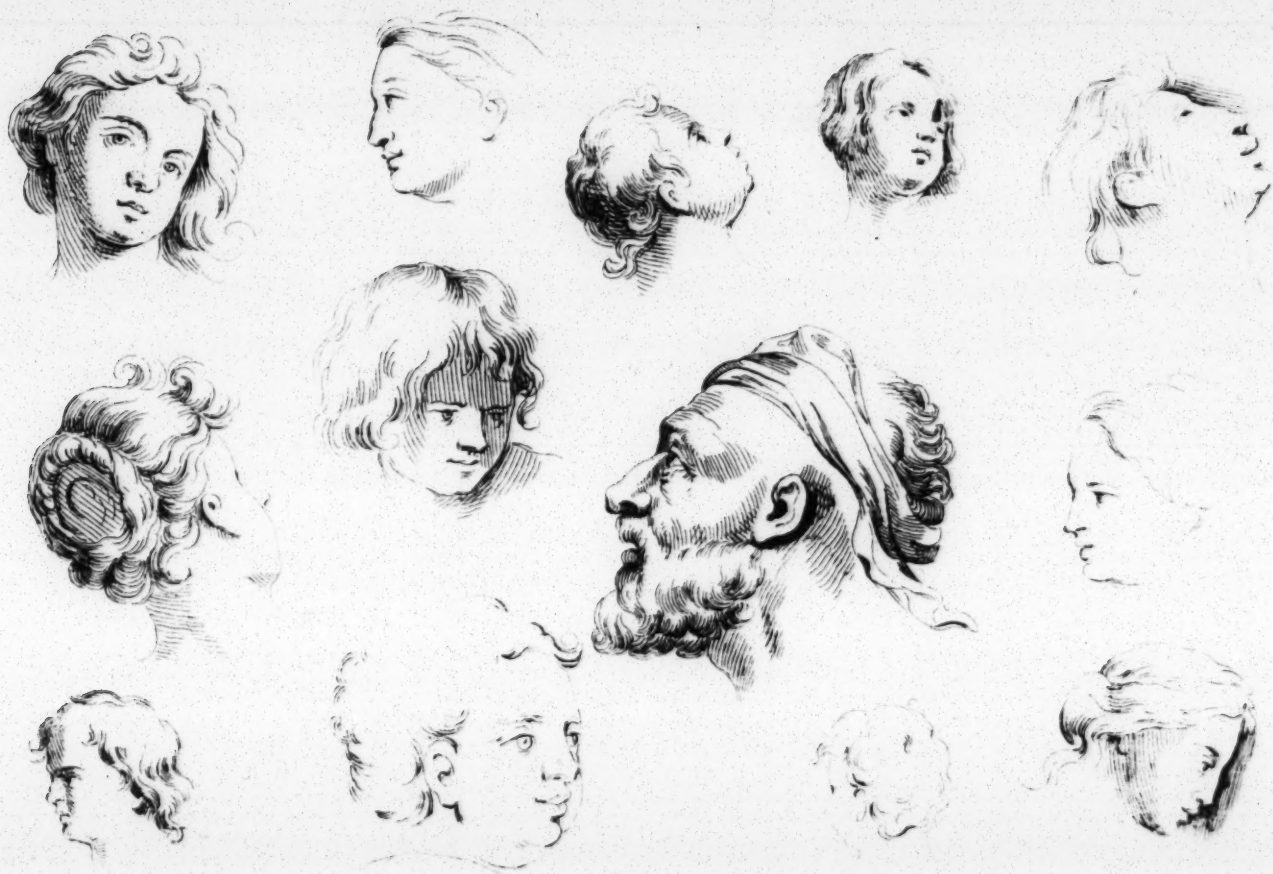


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II.



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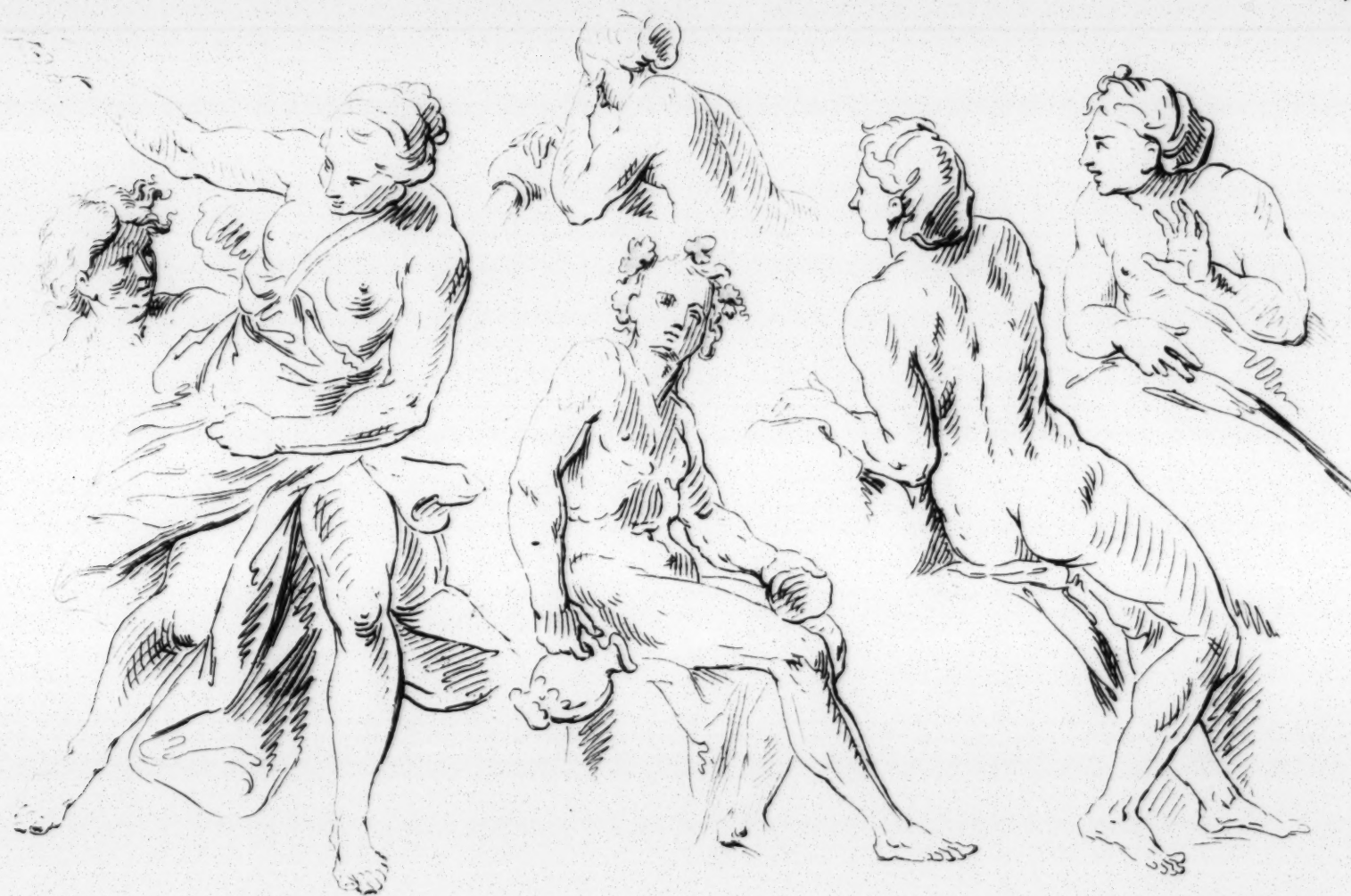


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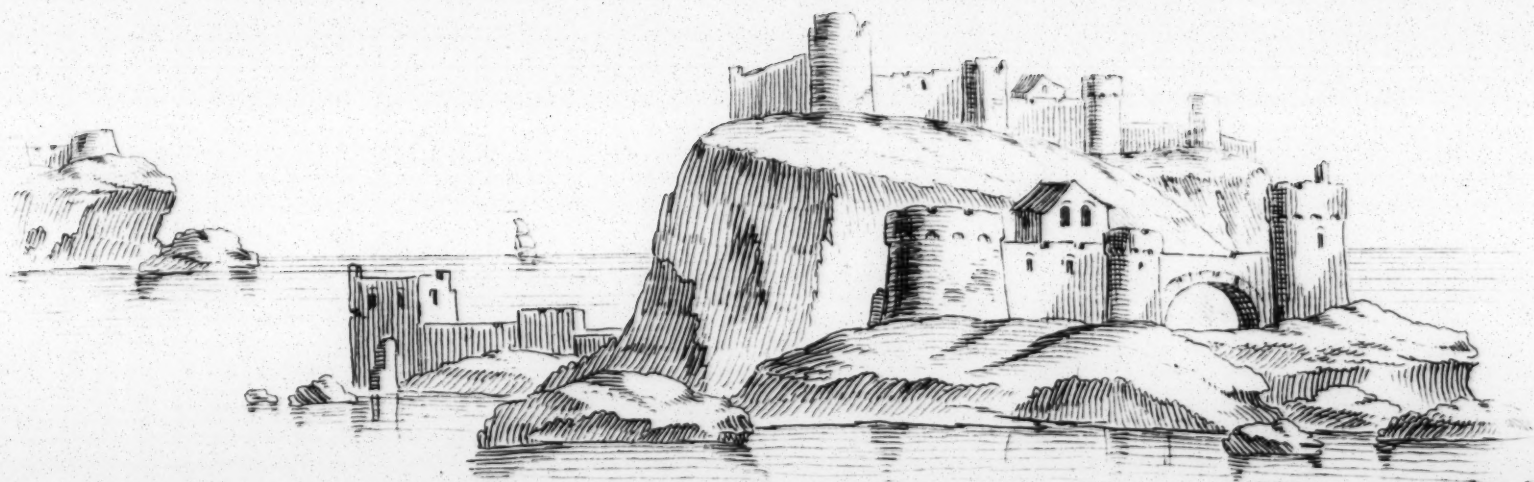
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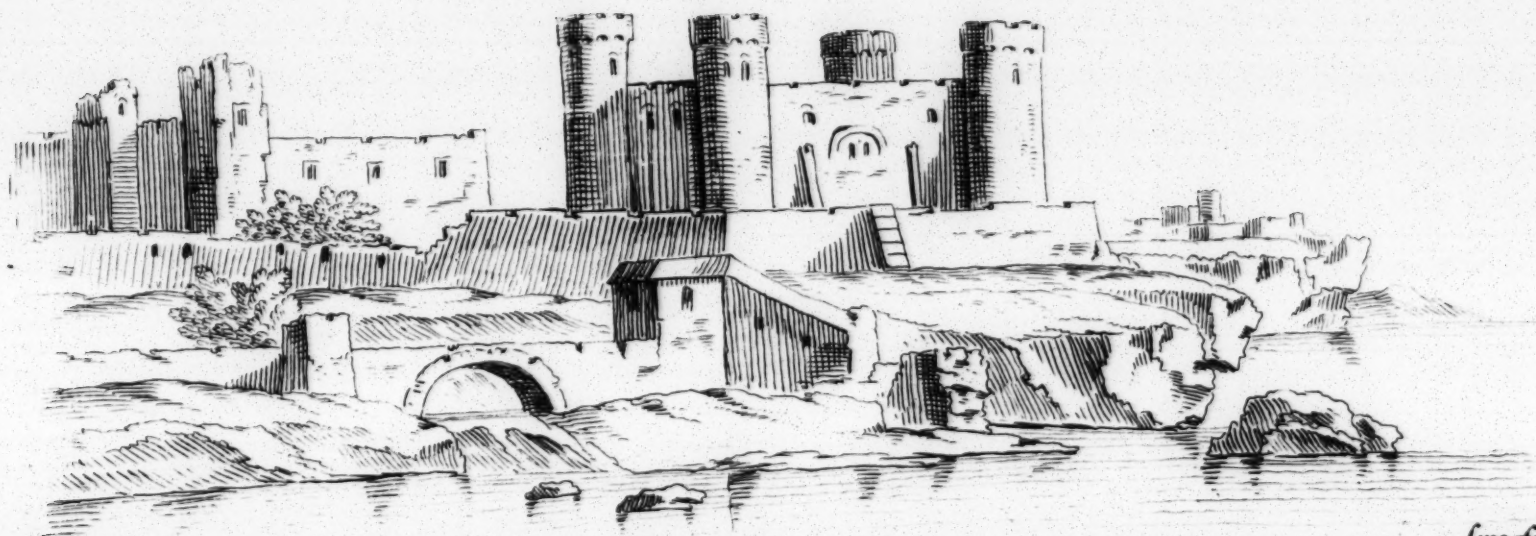


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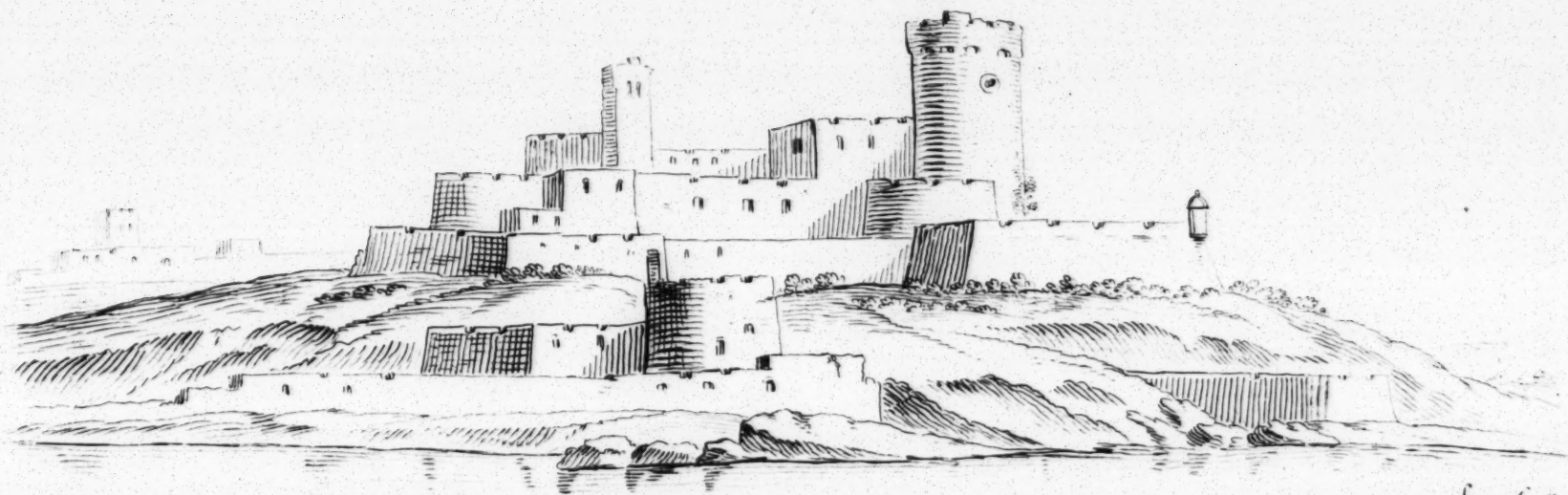
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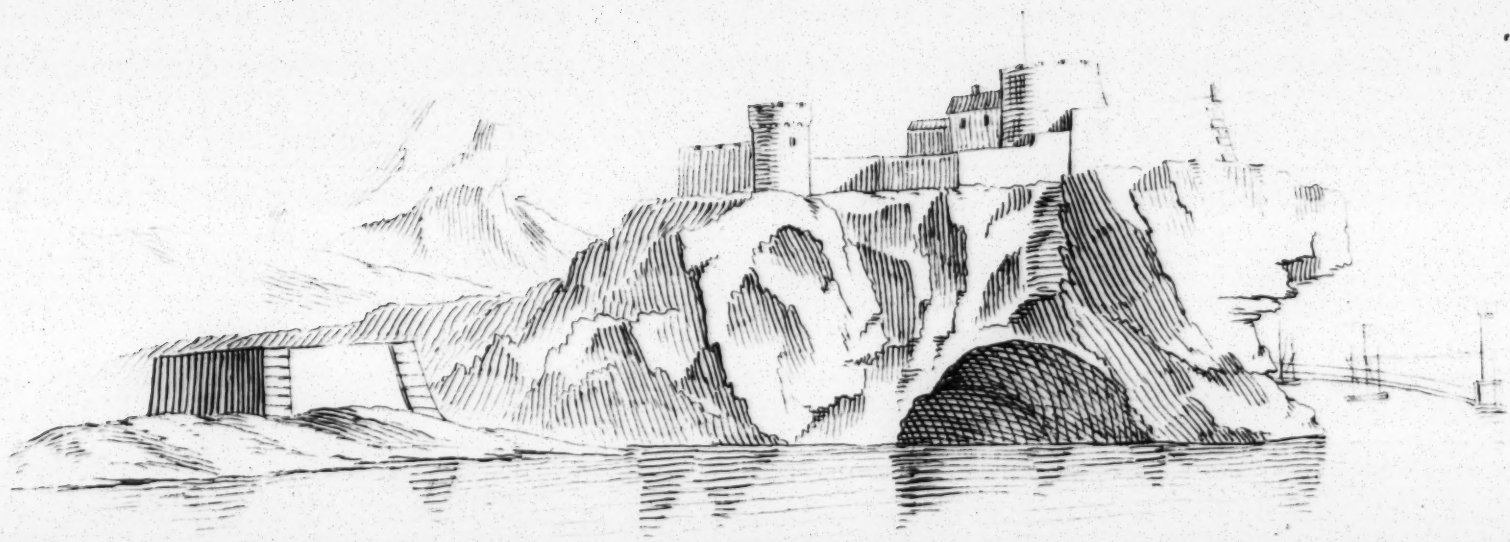
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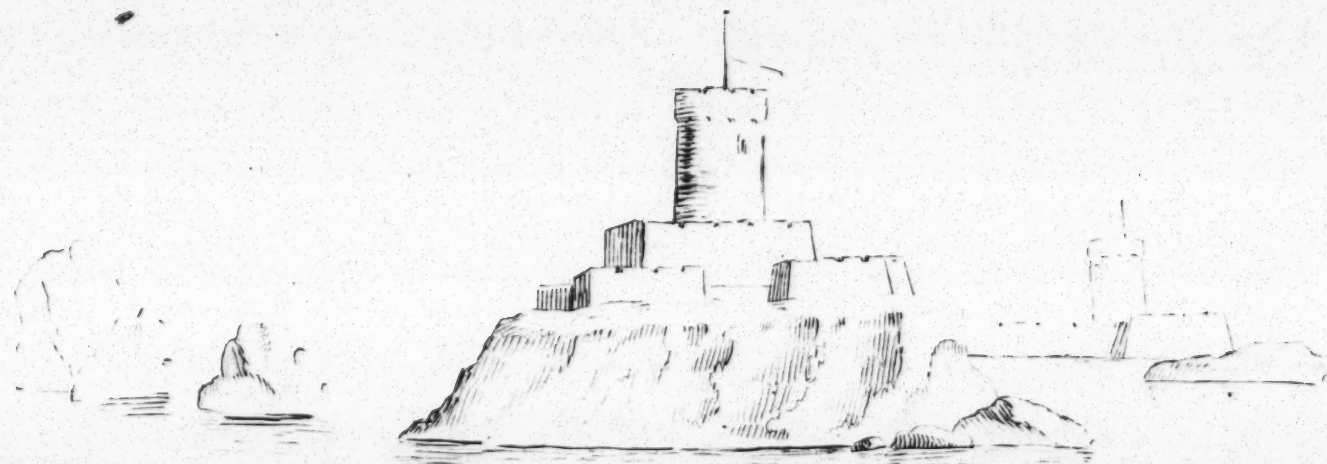
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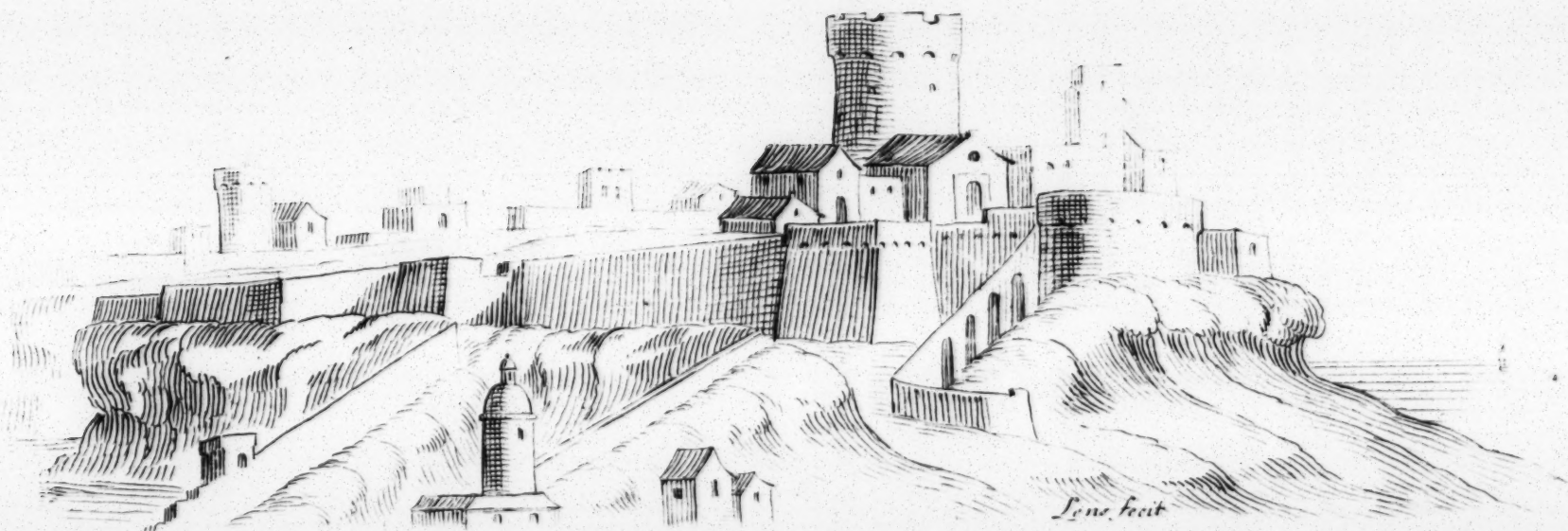
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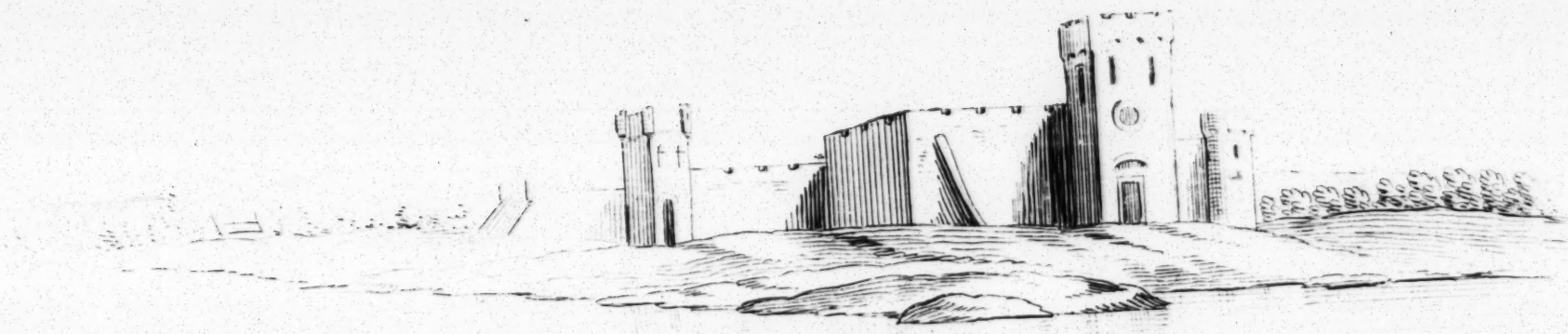


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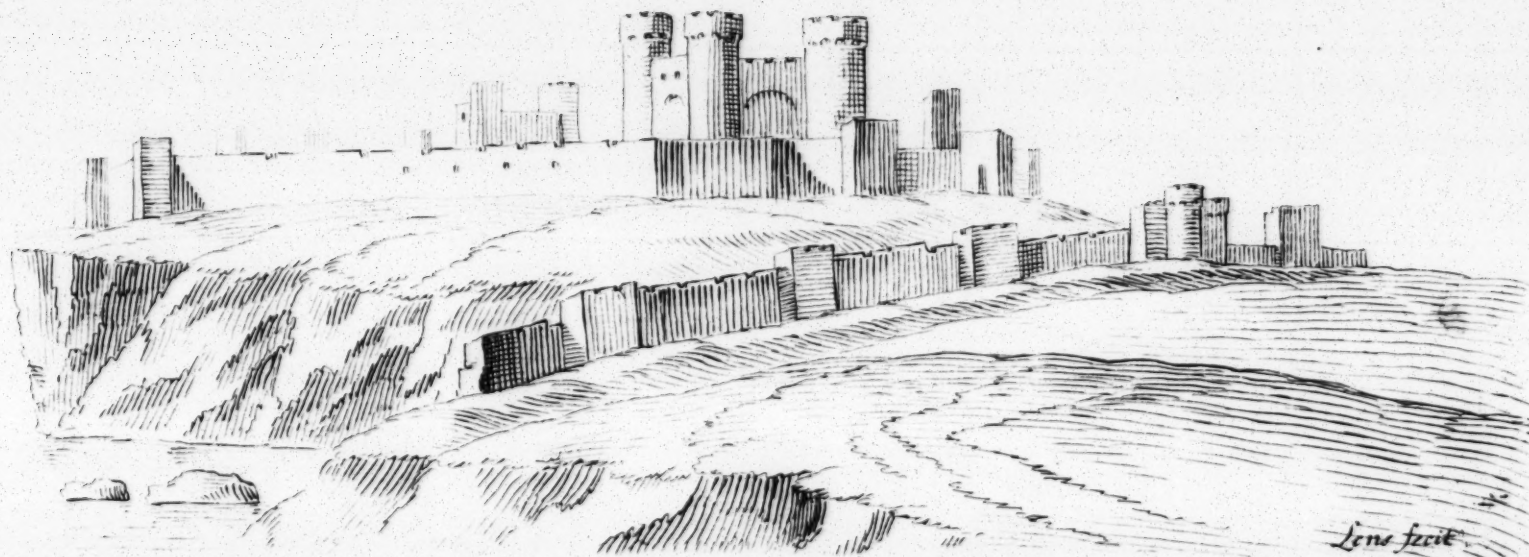


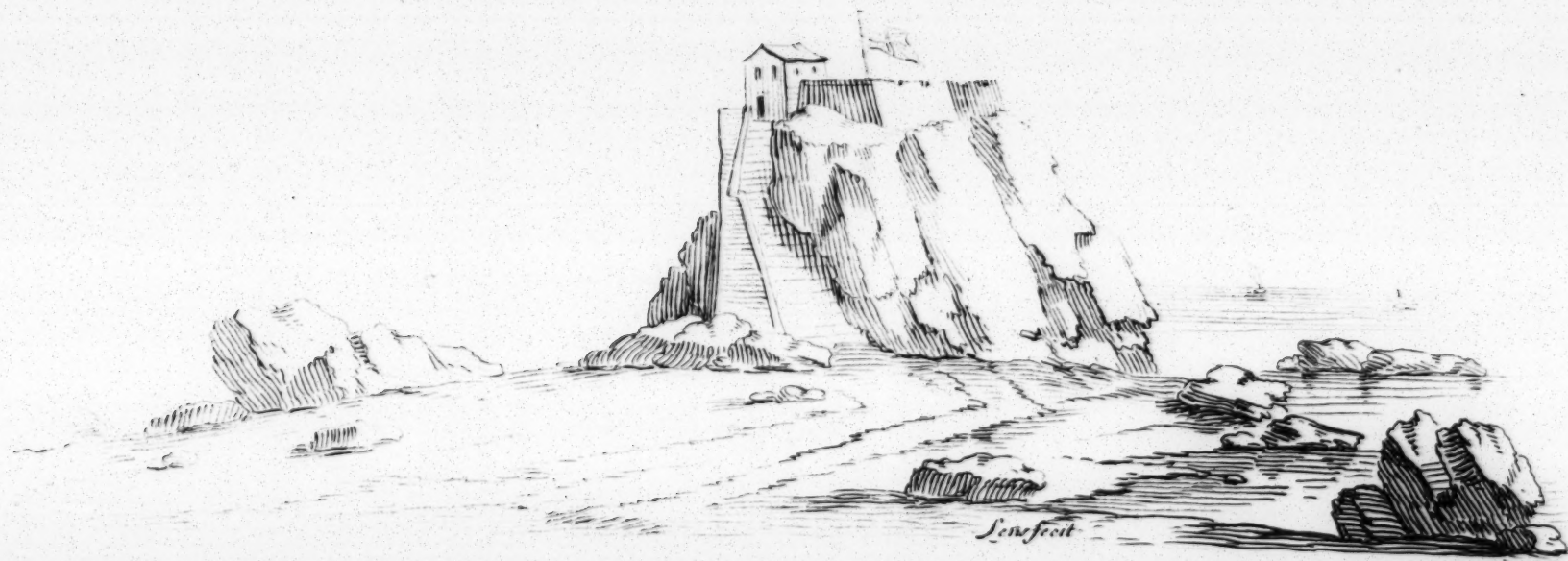




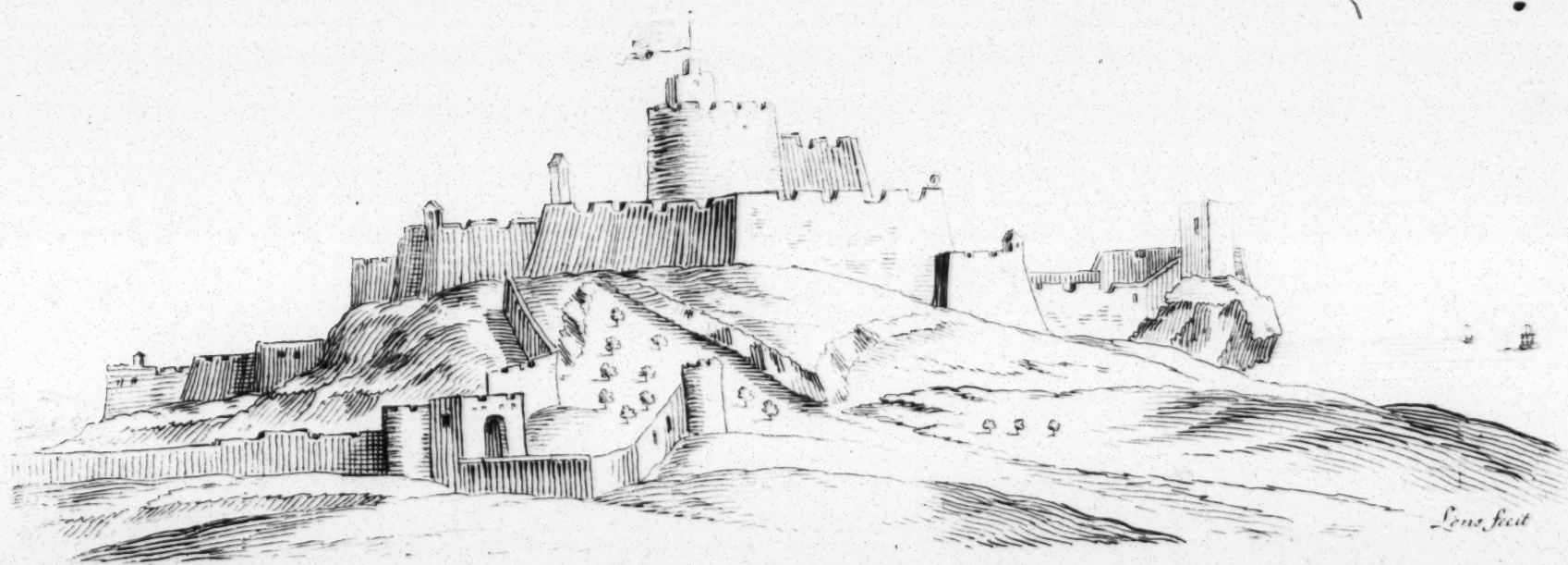
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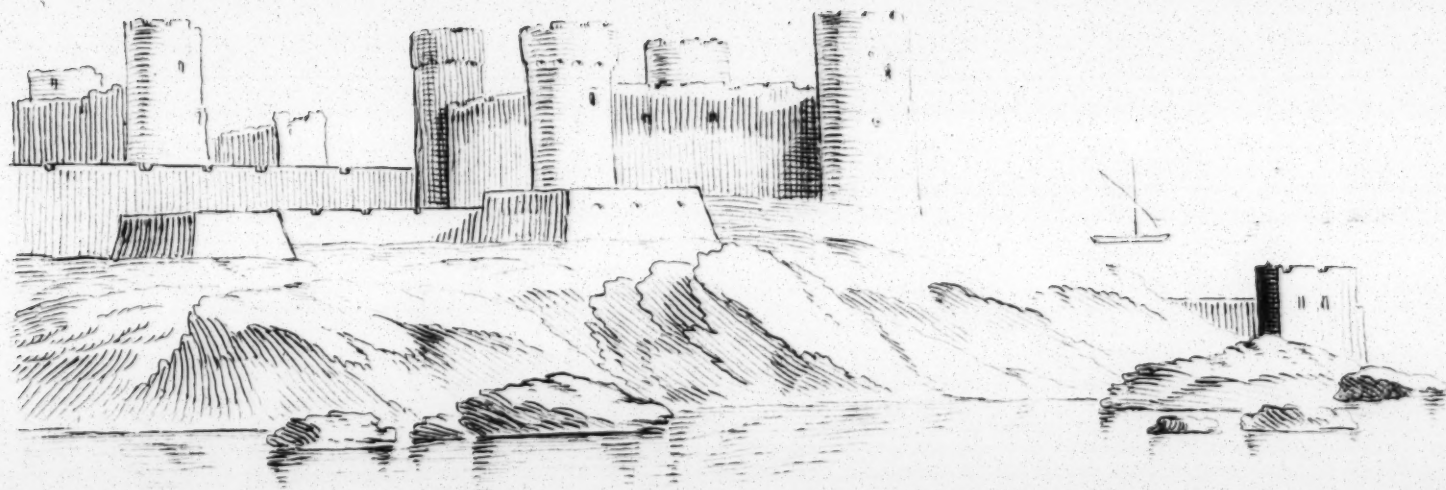




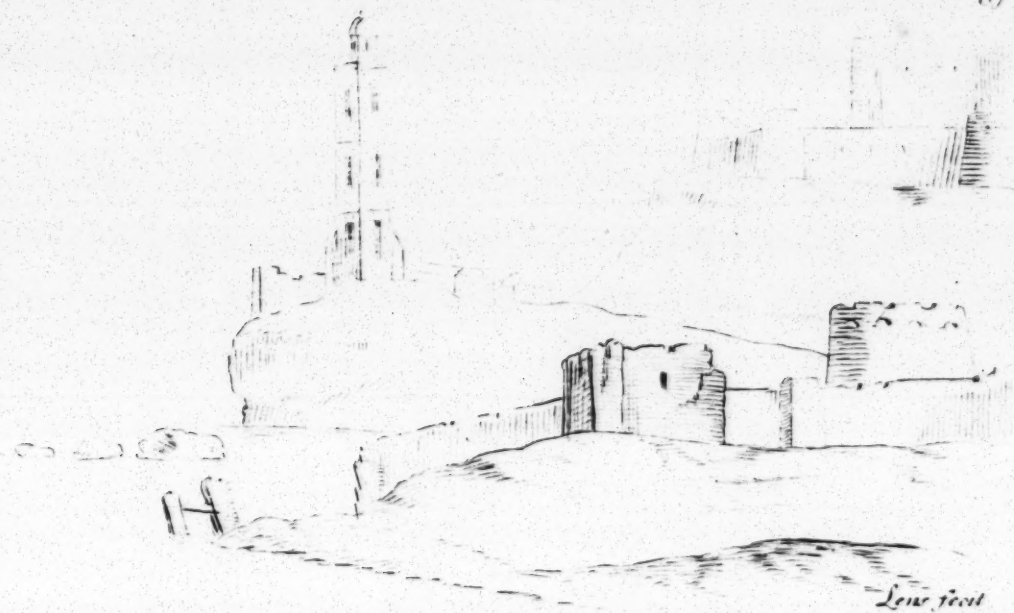


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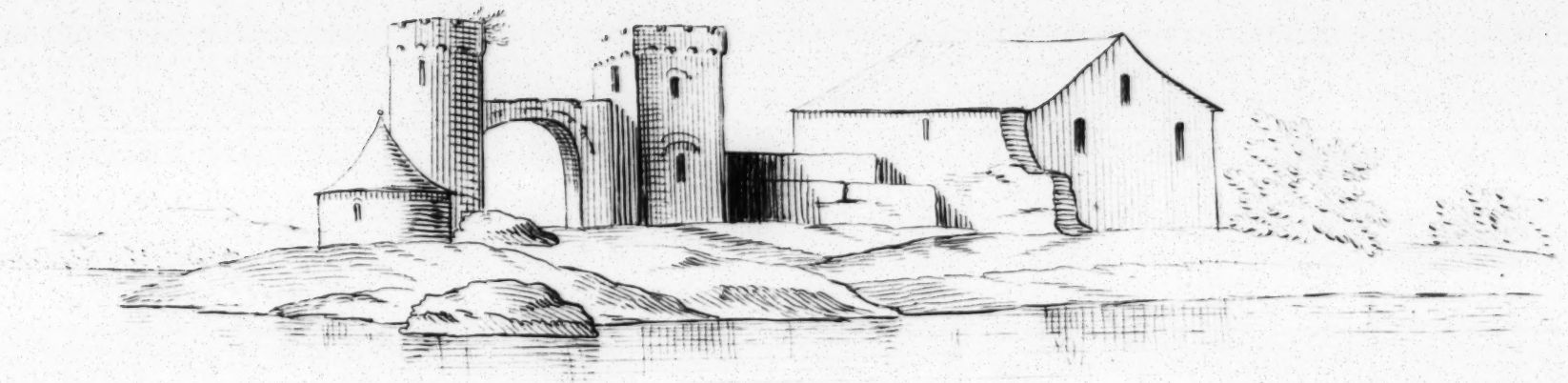
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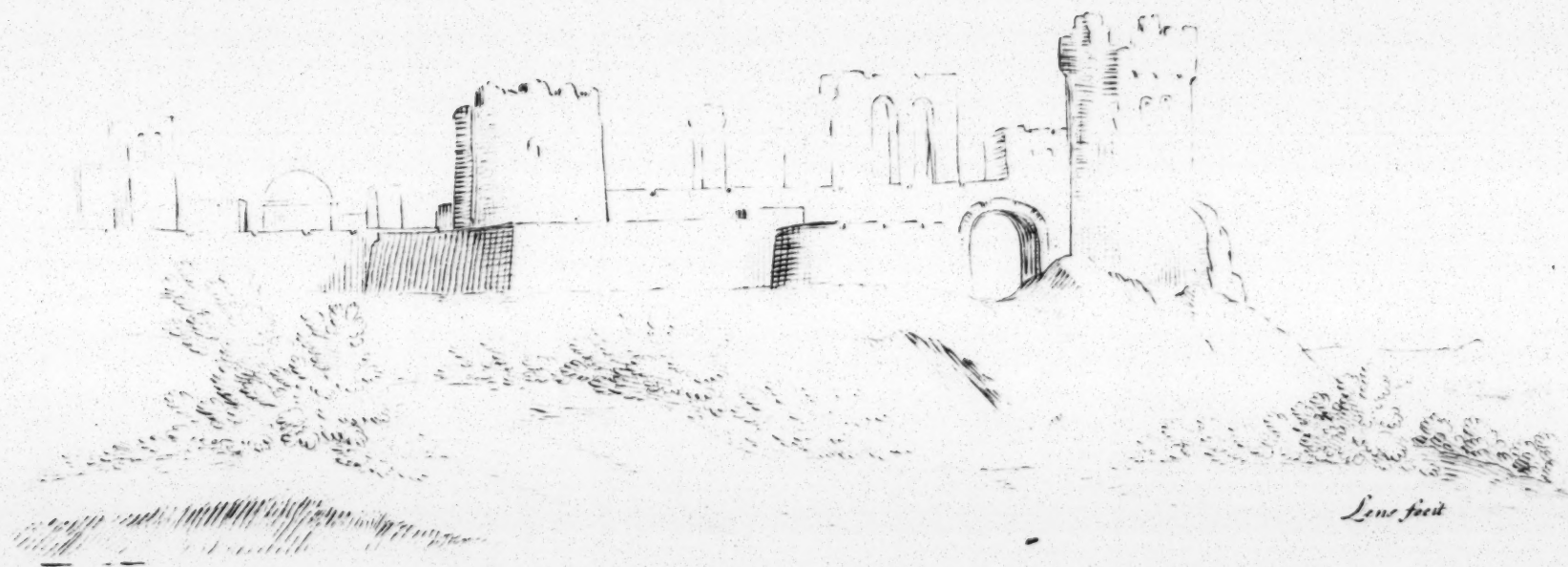
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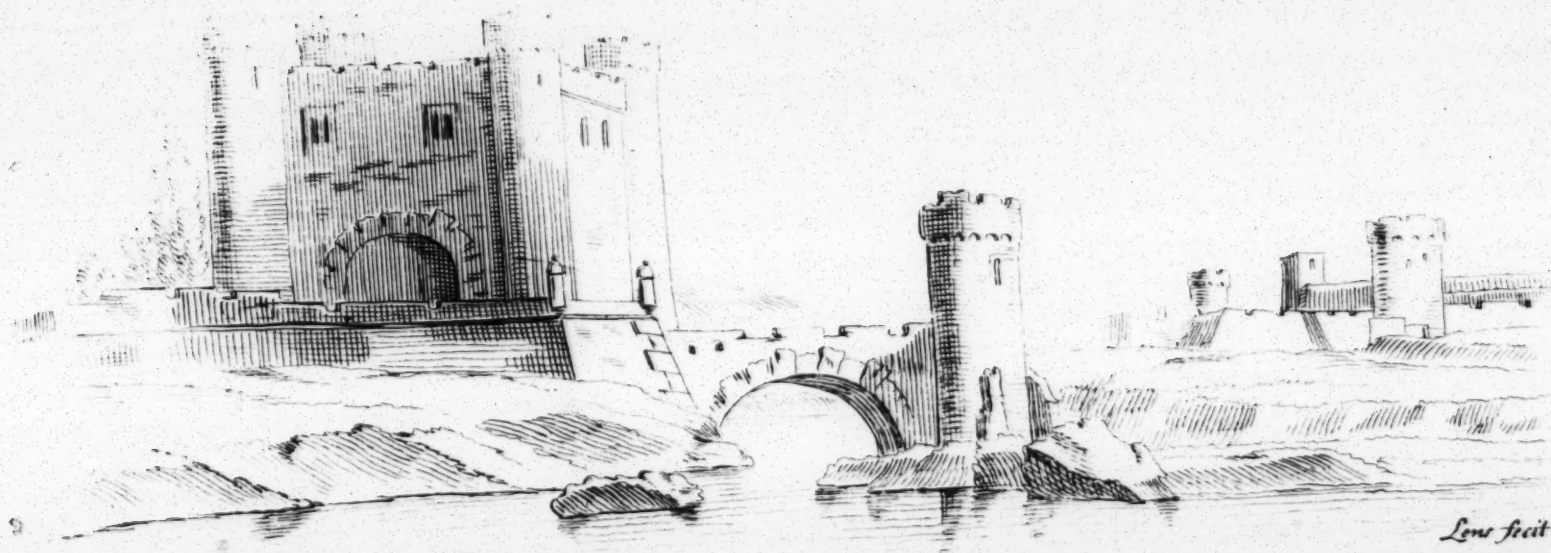


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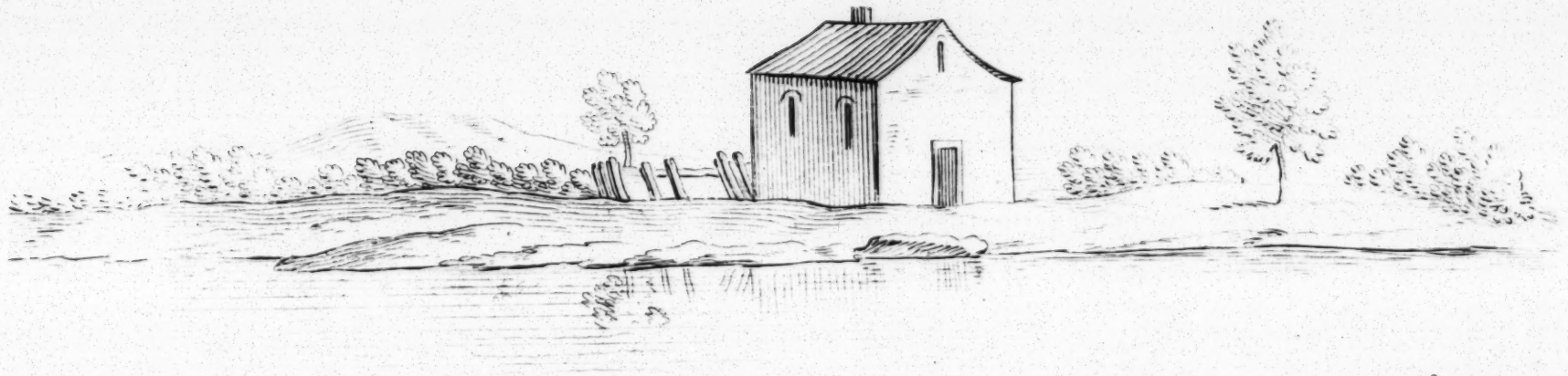






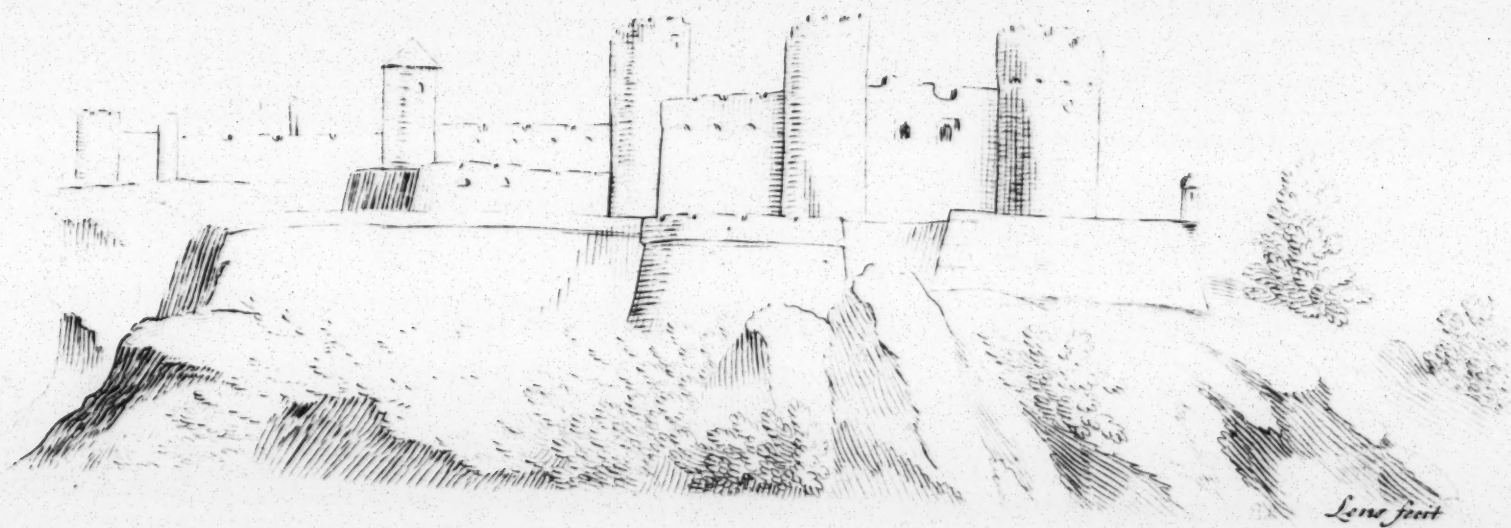




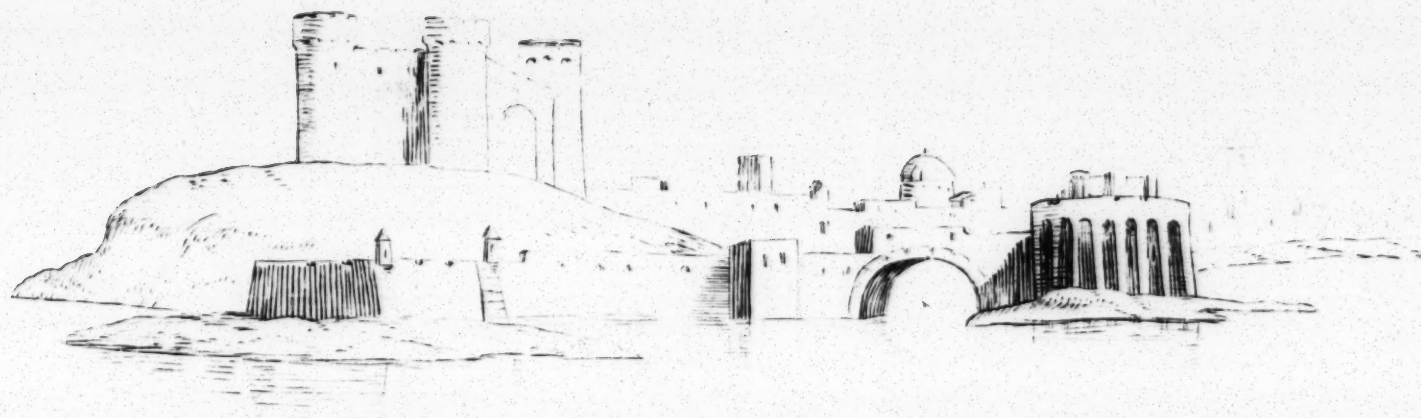


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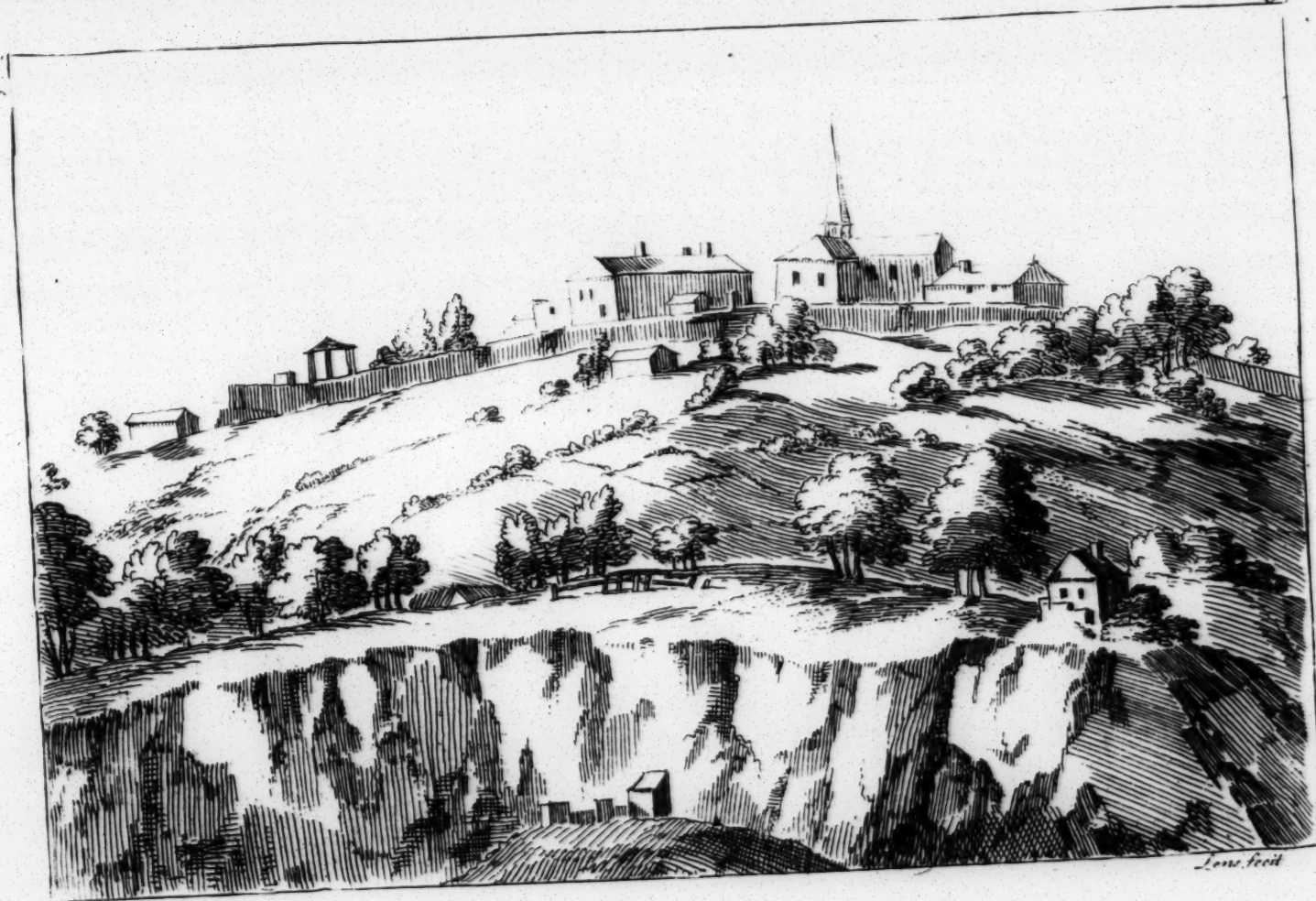
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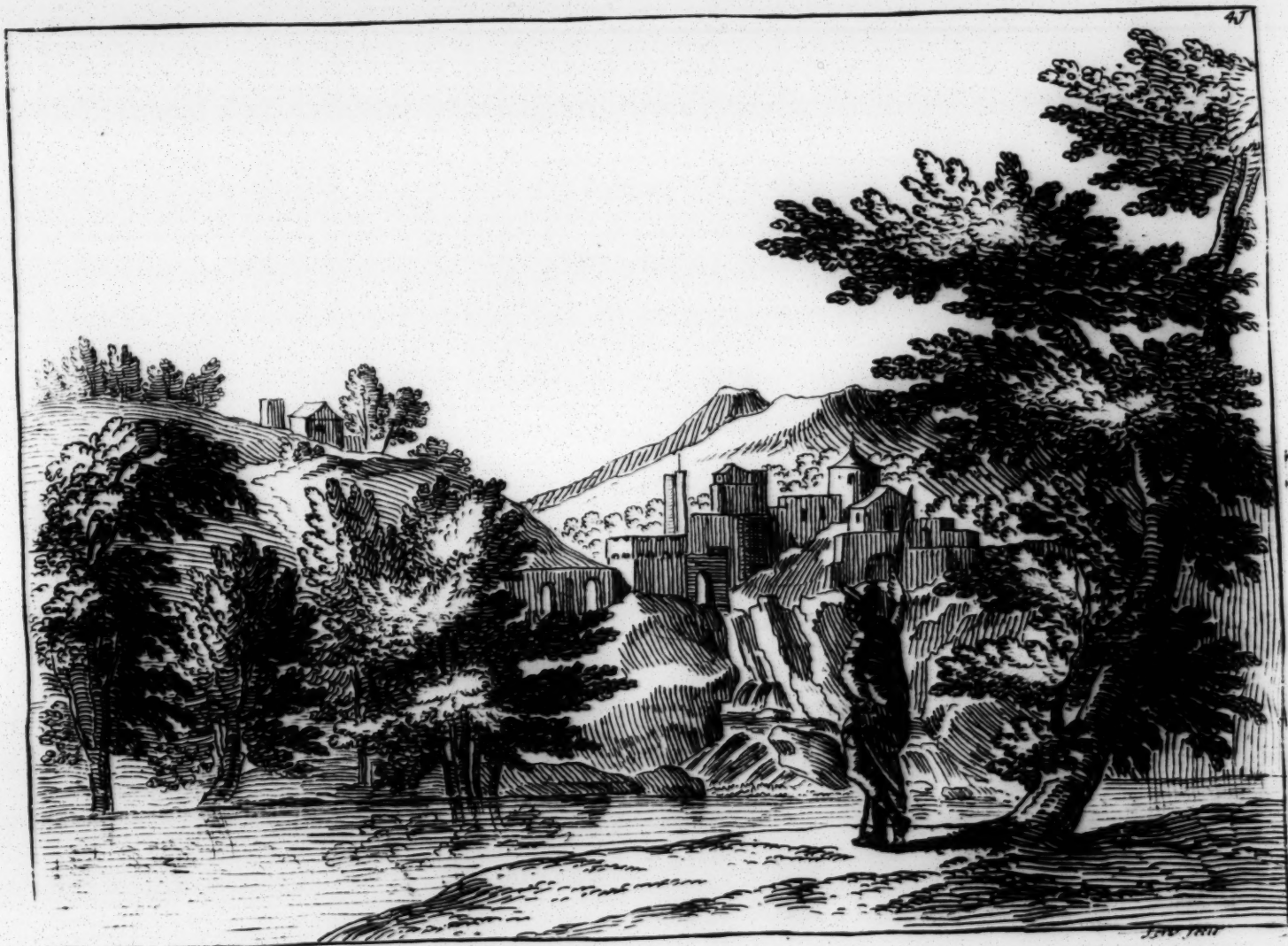






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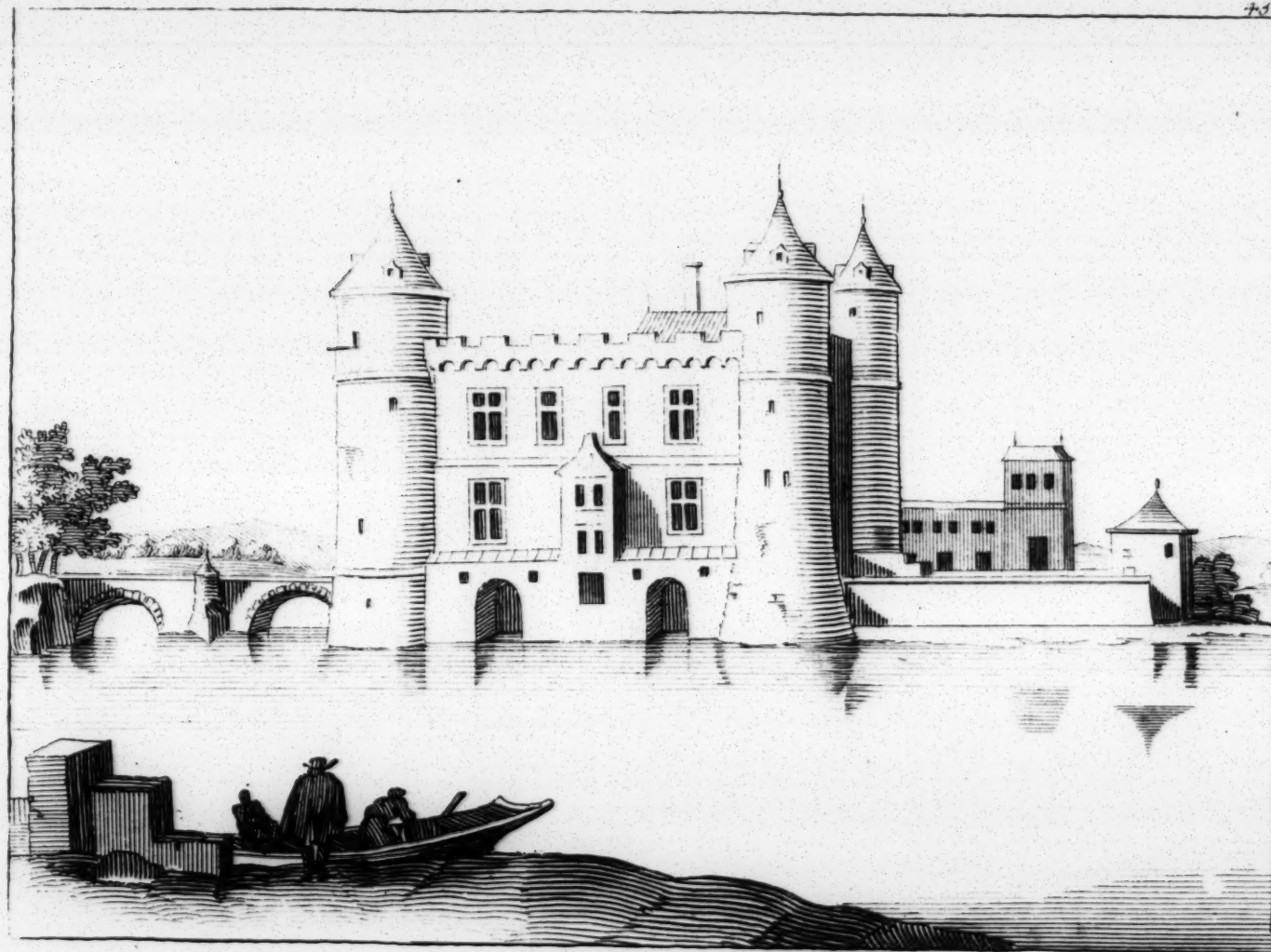






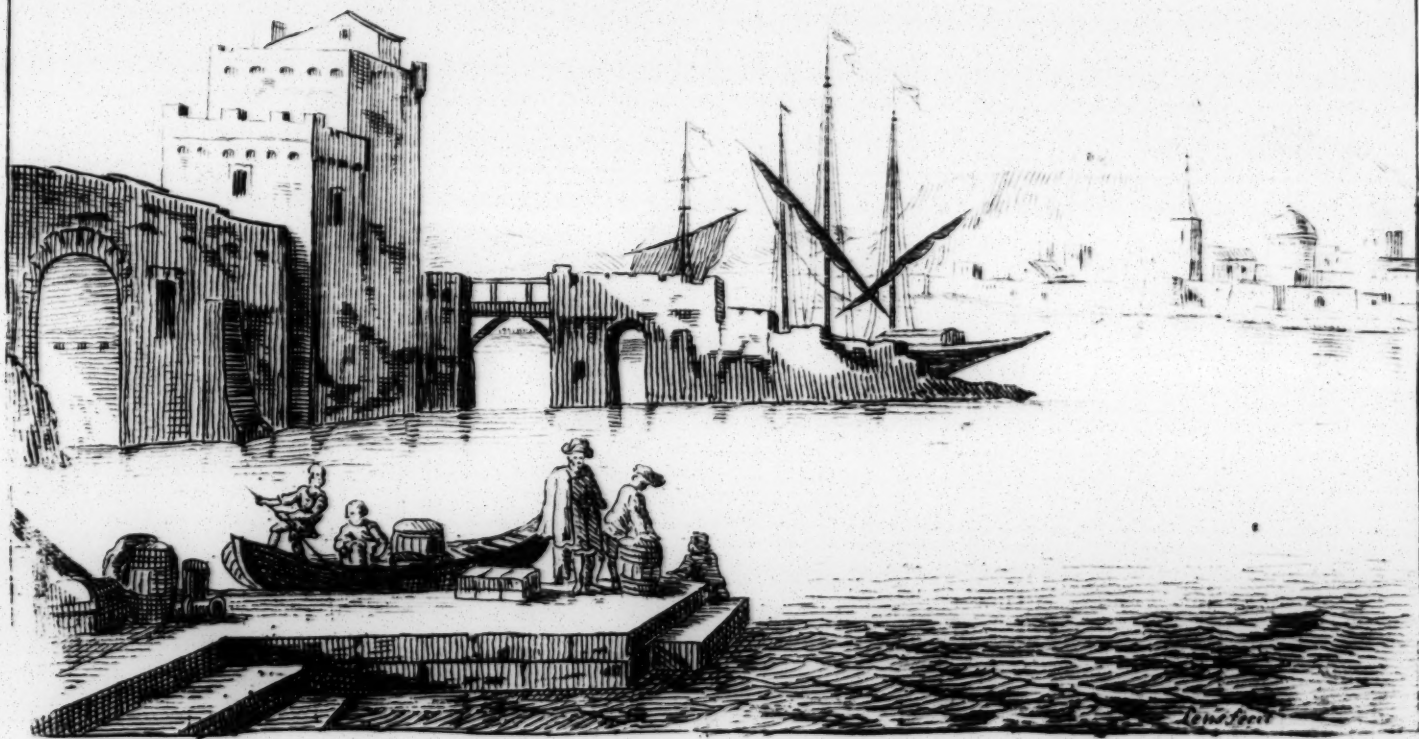




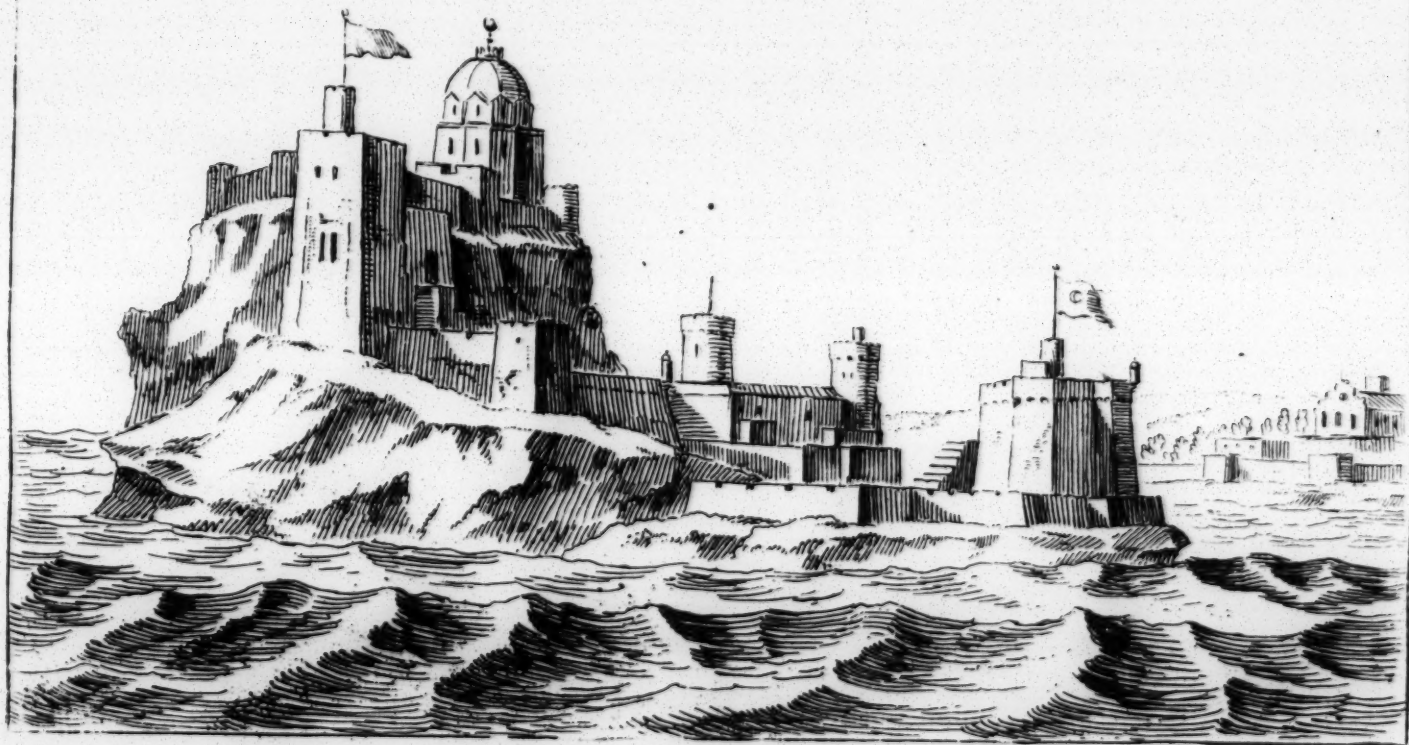


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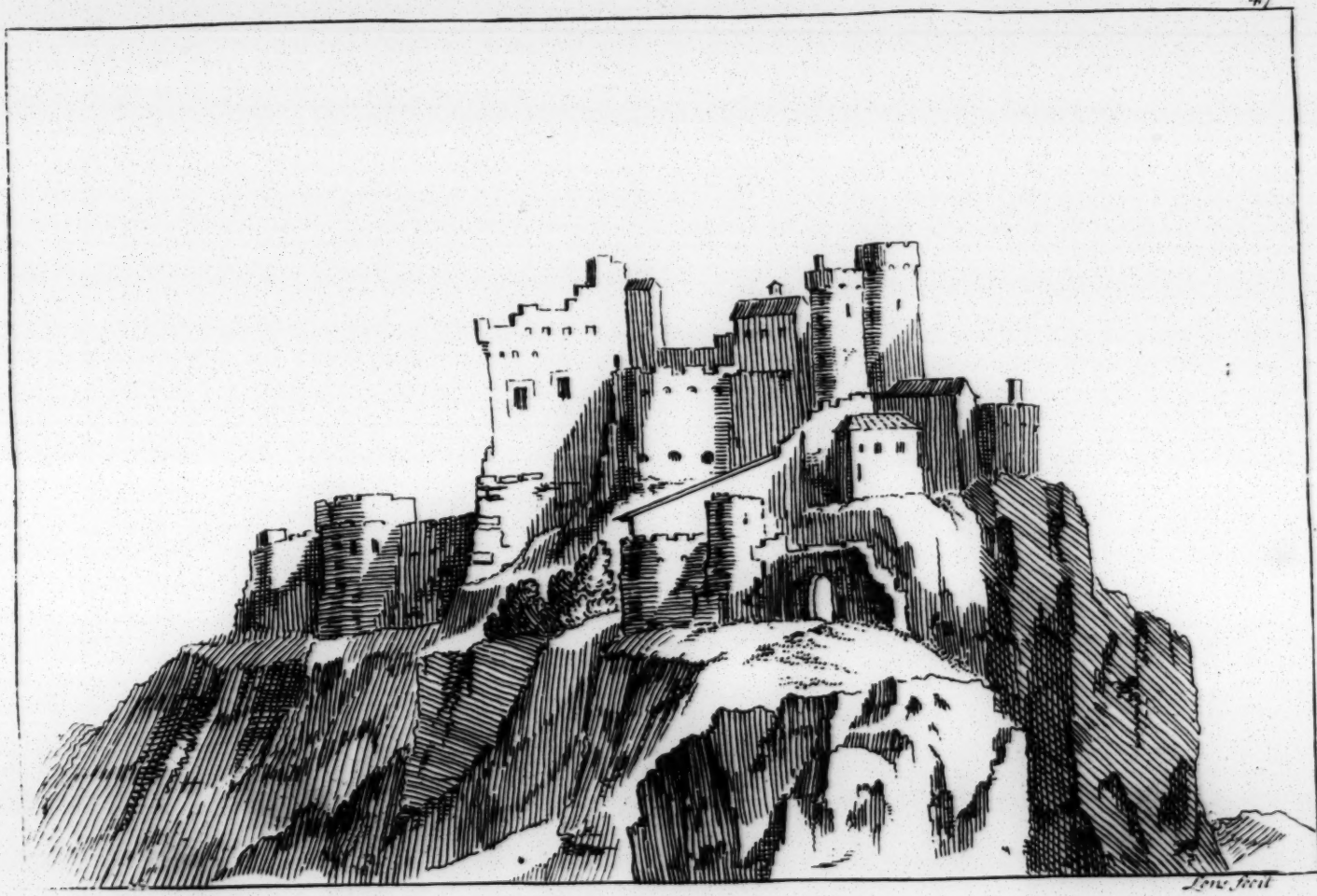




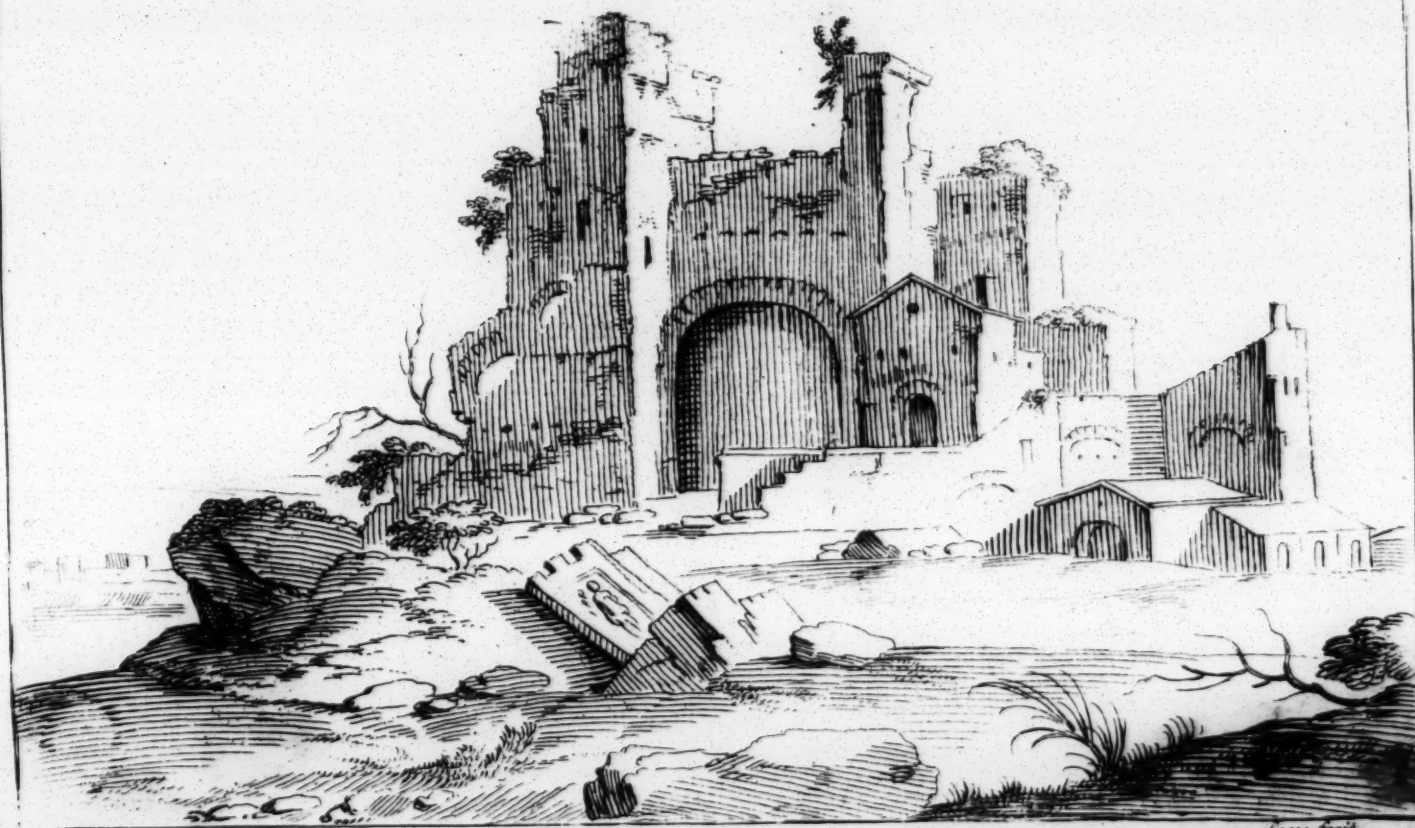


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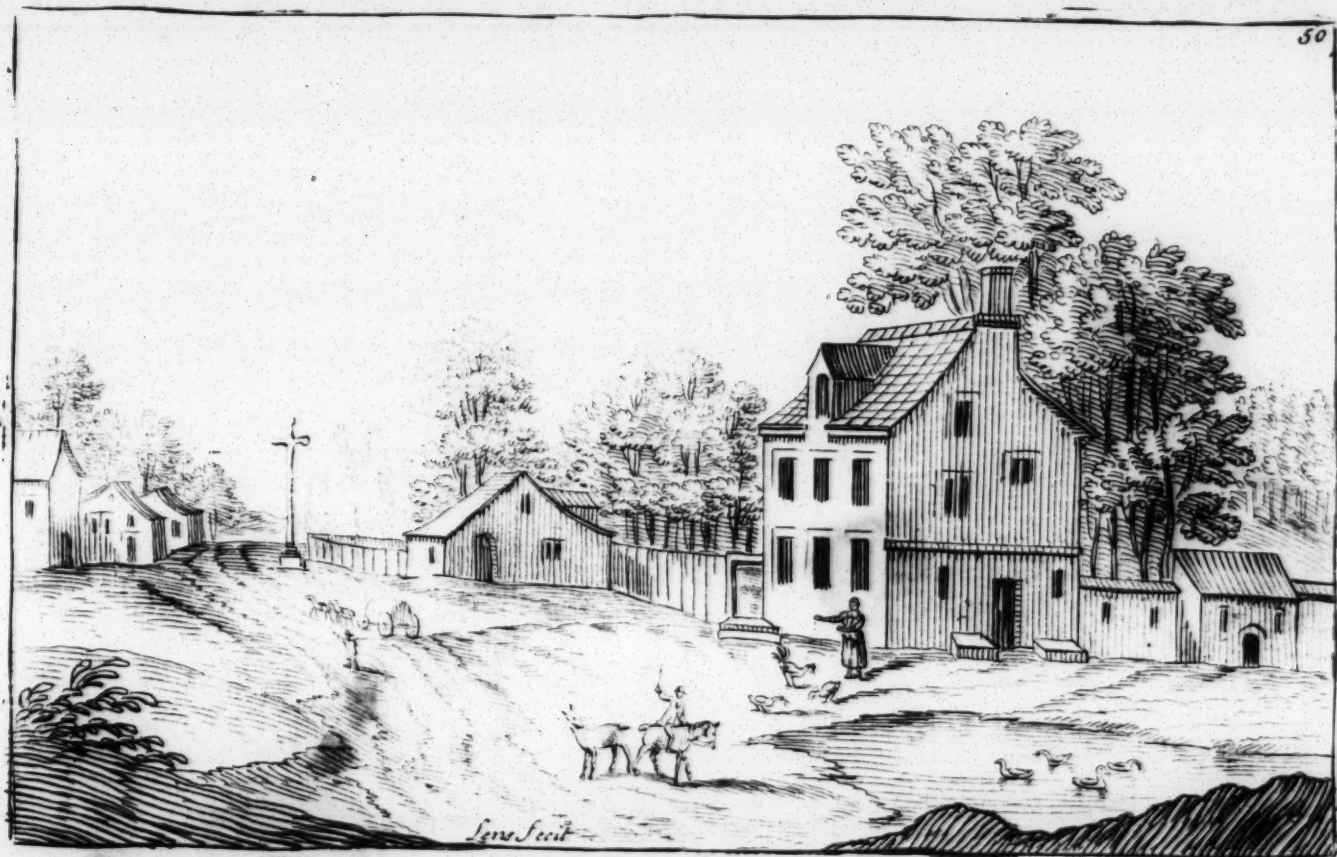
















John Smith











